

10593612

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTAU156CXH

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page for STN Seminar Schedule - N. America
NEWS 2 NOV 21 CAS patent coverage to include exemplified prophetic
substances identified in English-, French-, German-,
and Japanese-language basic patents from 2004-present
NEWS 3 NOV 26 MARPAT enhanced with FSORT command
NEWS 4 NOV 26 CHEMSAFE now available on STN Easy
NEWS 5 NOV 26 Two new SET commands increase convenience of STN
searching
NEWS 6 DEC 01 ChemPort single article sales feature unavailable
NEWS 7 DEC 12 GBFULL now offers single source for full-text
coverage of complete UK patent families
NEWS 8 DEC 17 Fifty-one pharmaceutical ingredients added to PS
NEWS 9 JAN 06 The retention policy for unread STNmail messages
will change in 2009 for STN-Columbus and STN-Tokyo
NEWS 10 JAN 07 WPIDS, WPINDEX, and WPIX enhanced Japanese Patent
Classification Data
NEWS 11 FEB 02 Simultaneous left and right truncation (SLART) added
for CERAB, COMPUAB, ELCOM, and SOLIDSTATEM
NEWS 12 FEB 02 GENBANK enhanced with SET PLURALS and SET SPELLING

NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that
specific topic.

All use of STN is subject to the provisions of the STN Customer
agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:37:57 ON 02 FEB 2009

10593612

=> FILE CAPLUS

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.22

0.22

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 02 FEB 2009

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 2 Feb 2009 VOL 150 ISS 6

FILE LAST UPDATED: 1 Feb 2009 (20090201/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> S US20070191520/PN

L1 1 US20070191520/PN

=> D ALL

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:1154634 CAPLUS

DN 143:423084

ED Entered STN: 28 Oct 2005

TI Photo-radical-curable resin composition containing epoxy resin

IN Sugiki, Takanori; Nishida, Yuichi

PA Nichiban Company Limited, Japan

SO PCT Int. Appl., 16 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM C08L063-00

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 42

FAN.CNT 1

10593612

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2005100472	A1	20051027	WO 2004-JP4672	20040331	
	W:			AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW		
	RW:			BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
	EP 1752494	A1	20070214	EP 2004-724799	20040331	
	R:			AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR		
	US 20070191520	A1	20070816	US 2006-593612	20060921	

<--

PRAI WO 2004-JP4672 W 20040331

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005100472	ICM	C08L063-00
	IPCI	C08L0063-00 [I,C*]
	IPCR	C08L0063-00 [I,C*]; C08L0063-00 [I,A]; G03F0007-027 [I,C*]; G03F0007-027 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
EP 1752494	IPCI	C08L0063-00 [I,A]
	IPCR	C08L0063-00 [I,C]; C08L0063-00 [I,A]; G03F0007-027 [I,C*]; G03F0007-027 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
US 20070191520	IPCI	C08C0001-14 [I,A]; C08C0001-00 [I,C*]
	NCL	524/160.000

AB The composition, useful for coatings, adhesives, sealing compns., etc., comprises an epoxy resin and a photo-radical-curable resin, and a triphenylmethane-type leuco dye. After the resin composition is applied the cured state can be visually and easily ascertained in a short time.

Thus,

a composition comprising Shikoh UV 7000B (polyurethane acrylate) 100, Epikote 828 (epoxy resin) 50, Aerosil 200 (silica) 10, DICY 15 (epoxy curing agent) 3 and Darocur 1173 (Photo-radical polymerization initiator) 1 part was

mixed with 0.05% tris(p-N,N-diethylaminophenyl)methane, showing white color before UV irradiation and bluish purple color after UV irradiation, and no viscosity change after storage for 1 mo at 40°.

ST epoxy photo radical curable resin; triphenylmethane leuco dye photocurable resin

IT Polyurethanes, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

10593612

(acrylic; photo-radical-curable resin composition containing epoxy resin)

IT Styrene-butadiene rubber, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(block, triblock, Kraton D 1155; photo-radical-curable resin composition containing epoxy resin)

IT Leuco dyes
(photo-radical-curable resin composition containing epoxy resin)

IT Epoxy resins, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(photo-radical-curable resin composition containing epoxy resin)

IT Polymerization
(photochem., radical; photo-radical-curable resin composition containing epoxy resin)

IT Adhesives
Coating materials
Sealing compositions
(photocurable; photo-radical-curable resin composition containing epoxy resin for)

IT Acrylic polymers, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(polyurethane-; photo-radical-curable resin composition containing epoxy resin)

IT 7631-86-9, Aerosil 200, uses
RL: MOA (Modifier or additive use); USES (Uses)
(colloidal; photo-radical-curable resin composition containing epoxy resin)

IT 60842-32-2, Aerosil R 972
RL: MOA (Modifier or additive use); USES (Uses)
(photo-radical-curable resin composition containing epoxy resin)

IT 27754-24-1 34962-82-8 868140-28-7 868140-37-8
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(photo-radical-curable resin composition containing epoxy resin)

IT 4865-00-3P 60813-12-9P 219631-61-5P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(preparation of triphenylmethane-type leuco dye for photo-radical-curable resin)

IT 91-66-7, Diethylaniline 120-21-8 613-28-5 613-29-6, Dibutylaniline 2217-07-4, Dipropylaniline 90134-10-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of triphenylmethane-type leuco dye for photo-radical-curable resin)

IT 694491-73-1D, block, triblock
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

10593612

(styrene-butadiene rubber, Kraton D 1155; photo-radical-curable resin composition containing epoxy resin)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Hodogaya Chemical Co Ltd; JP 02-58573 A 1990 CAPLUS
- (2) Nitto Electric Industrial Co Ltd; JP 63-123038 A 1988 CAPLUS
- (3) Tamura Kaken Kabushiki Kaisha; JP 09-34109 A 1997 CAPLUS
- (4) The Japan Atomic Power Co; JP 2001242249 A 2001 CAPLUS
- (5) The Japan Atomic Power Co; US 6524763 B1 2001 CAPLUS

=> FILE REG

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

6.62

6.84

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-0.82

-0.82

FILE 'REGISTRY' ENTERED AT 13:39:35 ON 02 FEB 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 1 FEB 2009 HIGHEST RN 1099320-21-4
DICTIONARY FILE UPDATES: 1 FEB 2009 HIGHEST RN 1099320-21-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> S -----STN Online and
Results-----You may only request information for one
Registry Number.-----OK -----

757 STN

0 ONLINE

0 -----STN ONLINE

(STN(W)ONLINE)

0 RESULTS

5 YOU

11192 MAY

10593612

```

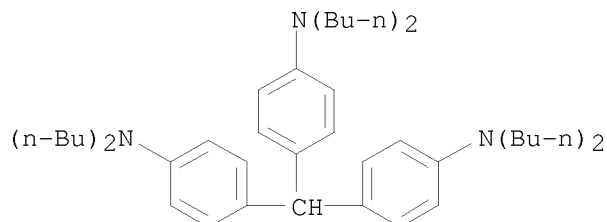
      257 ONLY
      1 REQUEST
      44 INFORMATION
    17075 FOR
  26886810 ONE
      0 REGISTRY
    49991 NUMBER
    1689 OK
      0 RESULTS-----YOU MAY ONLY REQUEST
INFORMATI      ON FOR ONE REGISTRY NUMBER.-----OK
-----
      -----

(RSULTS (W) YOU (W) MAY (W) ONLY (W) REQUEST (W) INFORMATION (W) FOR (W) ON
      E (W) REGISTRY (W) NUMBER (W) OK)
L2          0 -----STN ONLINE AND
RESULTS-----
      -----YOU MAY ONLY REQUEST INFORMATION FOR ONE REGISTRY
      NUMBER.-----OK
-----
      --

=> S   4865-00-3 OR   60813-12-9 OR   219631-61-5
      1 4865-00-3
          (4865-00-3/RN)
      1 60813-12-9
          (60813-12-9/RN)
      1 219631-61-5
          (219631-61-5/RN)
L3          3 4865-00-3 OR   60813-12-9 OR   219631-61-5

=> D 1-3

L3  ANSWER 1 OF 3  REGISTRY  COPYRIGHT 2009 ACS on STN
RN  219631-61-5  REGISTRY
ED  Entered STN:  11 Feb 1999
CN  Benzenamine, 4,4',4''-methylidynetris[N,N-dibutyl- (CA INDEX NAME)
MF  C43 H67 N3
SR  CA
LC  STN Files:   CA, CAPLUS, USPATFULL
```

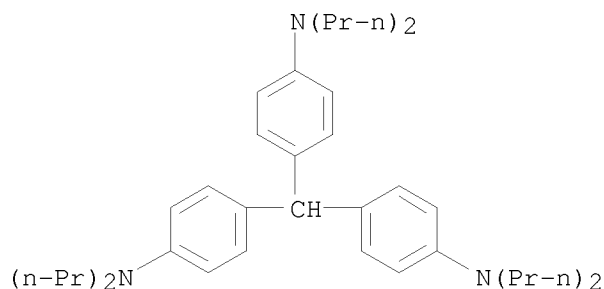


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

10593612

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2009 ACS on STN
RN 60813-12-9 REGISTRY
ED Entered STN: 16 Nov 1984
CN Benzenamine, 4,4',4''-methylidynetris[N,N-dipropyl- (CA INDEX NAME)
OTHER NAMES:
CN Tris(p-N,N-dipropylaminophenyl)methane
MF C37 H55 N3
LC STN Files: CA, CAPLUS, CHEMLIST, IFICDB, IFIPAT, IFIUDB, USPATFULL
Other Sources: EINECS**, NDSL**, TSCA**
(*Enter CHEMLIST File for up-to-date regulatory information)

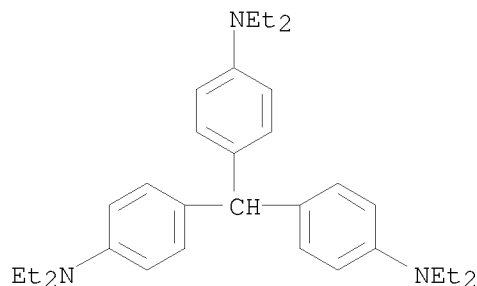


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2009 ACS on STN
RN 4865-00-3 REGISTRY
ED Entered STN: 16 Nov 1984
CN Benzenamine, 4,4',4''-methylidynetris[N,N-diethyl- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Aniline, 4,4',4''-methylidynetris[N,N-diethyl- (6CI, 7CI, 8CI)
OTHER NAMES:
CN C.I. Basic Violet 4, leuco
CN Ethyl violet leuco base
CN Leucoethyl Violet
CN Tris(p-N,N-diethylaminophenyl)methane
MF C31 H43 N3
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB,
TOXCENTER, USPATFULL, USPATOLD
(*File contains numerically searchable property data)

10593612



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

48 REFERENCES IN FILE CA (1907 TO DATE)
48 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> FILE CAPLUS

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

76.66

83.50

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-0.82

FILE 'CAPLUS' ENTERED AT 13:40:49 ON 02 FEB 2009

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 2 Feb 2009 VOL 150 ISS 6

FILE LAST UPDATED: 1 Feb 2009 (20090201/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

10593612

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D HIS

(FILE 'HOME' ENTERED AT 13:37:57 ON 02 FEB 2009)

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 02 FEB 2009
L1 1 S US20070191520/PN

FILE 'REGISTRY' ENTERED AT 13:39:35 ON 02 FEB 2009
L2 0 S -----STN ONLINE AND
RESULTS-----
L3 3 S 4865-00-3 OR 60813-12-9 OR 219631-61-5

FILE 'CAPLUS' ENTERED AT 13:40:49 ON 02 FEB 2009

=> S L3

L4 50 L3

=> FILE REG

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.50	84.00
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.82

FILE 'REGISTRY' ENTERED AT 13:41:28 ON 02 FEB 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 1 FEB 2009 HIGHEST RN 1099320-21-4
DICTIONARY FILE UPDATES: 1 FEB 2009 HIGHEST RN 1099320-21-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH July 5, 2008.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> S 60813-12-9

10593612

L5 1 60813-12-9
 (60813-12-9/RN)

=> S 219631-61-5
L6 1 219631-61-5
 (219631-61-5/RN)

=> FILE CAPLUS		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.48	84.48
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.82

FILE 'CAPLUS' ENTERED AT 13:41:56 ON 02 FEB 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 2 Feb 2009 VOL 150 ISS 6
FILE LAST UPDATED: 1 Feb 2009 (20090201/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> S L5
L7 6 L5

=> S L6
L8 2 L6

=> D ALL L5
YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:END

=> D ALL L7

10593612

L7 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:1154634 CAPLUS
DN 143:423084
ED Entered STN: 28 Oct 2005
TI Photo-radical-curable resin composition containing epoxy resin
IN Sugiki, Takanori; Nishida, Yuichi
PA Nichiban Company Limited, Japan
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C08L063-00
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005100472	A1	20051027	WO 2004-JP4672	20040331
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1752494	A1	20070214	EP 2004-724799	20040331
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR				
	US 20070191520	A1	20070816	US 2006-593612	20060921
PRAI	WO 2004-JP4672	W	20040331		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005100472	ICM	C08L063-00
	IPCI	C08L0063-00 [ICM,7]
	IPCR	C08L0063-00 [I,C*]; C08L0063-00 [I,A]; G03F0007-027 [I,C*]; G03F0007-027 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
EP 1752494	IPCI	C08L0063-00 [I,A]
	IPCR	C08L0063-00 [I,C]; C08L0063-00 [I,A]; G03F0007-027 [I,C*]; G03F0007-027 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
US 20070191520	IPCI	C08C0001-14 [I,A]; C08C0001-00 [I,C*]
	NCL	524/160.000

AB The composition, useful for coatings, adhesives, sealing compns., etc., comprises an epoxy resin and a photo-radical-curable resin, and a triphenylmethane-type leuco dye. After the resin composition is applied the cured state can be visually and easily ascertained in a short time. Thus,

10593612

a composition comprising Shikoh UV 7000B (polyurethane acrylate) 100, Epikote 828 (epoxy resin) 50, Aerosil 200 (silica) 10, DICY 15 (epoxy curing agent) 3 and Darocur 1173 (Photo-radical polymerization initiator) 1 part was mixed with 0.05% tris(p-N,N-diethylaminophenyl)methane, showing white color before UV irradiation and bluish purple color after UV irradiation, and no viscosity change after storage for 1 mo at 40°.

ST epoxy photo radical curable resin; triphenylmethane leuco dye photocurable resin

IT Polyurethanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(acrylic; photo-radical-curable resin composition containing epoxy resin)

IT Styrene-butadiene rubber, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(block, triblock, Kraton D 1155; photo-radical-curable resin composition containing epoxy resin)

IT Leuco dyes
(photo-radical-curable resin composition containing epoxy resin)

IT Epoxy resins, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(photo-radical-curable resin composition containing epoxy resin)

IT Polymerization
(photochem., radical; photo-radical-curable resin composition containing epoxy resin)

IT Adhesives
Coating materials
Sealing compositions
(photocurable; photo-radical-curable resin composition containing epoxy resin for)

IT Acrylic polymers, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(polyurethane-; photo-radical-curable resin composition containing epoxy resin)

IT 7631-86-9, Aerosil 200, uses
RL: MOA (Modifier or additive use); USES (Uses)
(colloidal; photo-radical-curable resin composition containing epoxy resin)

IT 60842-32-2, Aerosil R 972
RL: MOA (Modifier or additive use); USES (Uses)
(photo-radical-curable resin composition containing epoxy resin)

IT 27754-24-1 34962-82-8 868140-28-7 868140-37-8
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(photo-radical-curable resin composition containing epoxy resin)

10593612

IT 4865-00-3P 60813-12-9P 219631-61-5P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP
(Preparation); USES (Uses)
(preparation of triphenylmethane-type leuco dye for
photo-radical-curable
resin)
IT 91-66-7, Diethylaniline 120-21-8 613-28-5 613-29-6, Dibutylaniline
2217-07-4, Dipropylaniline 90134-10-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of triphenylmethane-type leuco dye for
photo-radical-curable
resin)
IT 694491-73-1D, block, triblock
RL: POF (Polymer in formulation); TEM (Technical or engineered material
use); USES (Uses)
(styrene-butadiene rubber, Kraton D 1155; photo-radical-curable resin
composition containing epoxy resin)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Hodogaya Chemical Co Ltd; JP 02-58573 A 1990 CAPLUS
(2) Nitto Electric Industrial Co Ltd; JP 63-123038 A 1988 CAPLUS
(3) Tamura Kaken Kabushiki Kaisha; JP 09-34109 A 1997 CAPLUS
(4) The Japan Atomic Power Co; JP 2001242249 A 2001 CAPLUS
(5) The Japan Atomic Power Co; US 6524763 B1 2001 CAPLUS

=> D HIS

(FILE 'HOME' ENTERED AT 13:37:57 ON 02 FEB 2009)
FILE 'CAPLUS' ENTERED AT 13:38:35 ON 02 FEB 2009
L1 1 S US20070191520/PN
FILE 'REGISTRY' ENTERED AT 13:39:35 ON 02 FEB 2009
L2 0 S -----STN ONLINE AND
RESULTS-----
L3 3 S 4865-00-3 OR 60813-12-9 OR 219631-61-5
FILE 'CAPLUS' ENTERED AT 13:40:49 ON 02 FEB 2009
L4 50 S L3
FILE 'REGISTRY' ENTERED AT 13:41:28 ON 02 FEB 2009
L5 1 S 60813-12-9
L6 1 S 219631-61-5
FILE 'CAPLUS' ENTERED AT 13:41:56 ON 02 FEB 2009
L7 6 S L5
L8 2 S L6

=> D ALL L8

L8 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2005:1154634 CAPLUS
DN 143:423084
ED Entered STN: 28 Oct 2005

10593612

TI Photo-radical-curable resin composition containing epoxy resin
IN Sugiki, Takanori; Nishida, Yuichi
PA Nichiban Company Limited, Japan
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C08L063-00
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005100472	A1	20051027	WO 2004-JP4672	20040331
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	EP 1752494	A1	20070214	EP 2004-724799	20040331
	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR			
	US 20070191520	A1	20070816	US 2006-593612	20060921
PRAI	WO 2004-JP4672	W	20040331		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005100472	ICM	C08L063-00
	IPCI	C08L0063-00 [I,C*];
	IPCR	C08L0063-00 [I,C*]; C08L0063-00 [I,A]; G03F0007-027 [I,C*]; G03F0007-027 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
EP 1752494	IPCI	C08L0063-00 [I,A]
	IPCR	C08L0063-00 [I,C]; C08L0063-00 [I,A]; G03F0007-027 [I,C*]; G03F0007-027 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
US 20070191520	IPCI	C08C0001-14 [I,A]; C08C0001-00 [I,C*]
	NCL	524/160.000

AB The composition, useful for coatings, adhesives, sealing compns., etc., comprises an epoxy resin and a photo-radical-curable resin, and a triphenylmethane-type leuco dye. After the resin composition is applied the cured state can be visually and easily ascertained in a short time. Thus, a composition comprising Shikoh UV 7000B (polyurethane acrylate) 100, Epikote 828 (epoxy resin) 50, Aerosil 200 (silica) 10, DICY 15 (epoxy curing agent) 3 and Darocur 1173 (Photo-radical polymerization initiator) 1 part was

10593612

mixed with 0.05% tris(p-N,N-diethylaminophenyl)methane, showing white color before UV irradiation and bluish purple color after UV irradiation, and no viscosity change after storage for 1 mo at 40°.

ST epoxy photo radical curable resin; triphenylmethane leuco dye photocurable resin

IT Polyurethanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(acrylic; photo-radical-curable resin composition containing epoxy resin)

IT Styrene-butadiene rubber, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(block, triblock, Kraton D 1155; photo-radical-curable resin composition containing epoxy resin)

IT Leuco dyes
(photo-radical-curable resin composition containing epoxy resin)

IT Epoxy resins, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(photo-radical-curable resin composition containing epoxy resin)

IT Polymerization
(photochem., radical; photo-radical-curable resin composition containing epoxy resin)

IT Adhesives
Coating materials
Sealing compositions
(photocurable; photo-radical-curable resin composition containing epoxy resin for)

IT Acrylic polymers, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(polyurethane-; photo-radical-curable resin composition containing epoxy resin)

IT 7631-86-9, Aerosil 200, uses
RL: MOA (Modifier or additive use); USES (Uses)
(colloidal; photo-radical-curable resin composition containing epoxy resin)

IT 60842-32-2, Aerosil R 972
RL: MOA (Modifier or additive use); USES (Uses)
(photo-radical-curable resin composition containing epoxy resin)

IT 27754-24-1 34962-82-8 868140-28-7 868140-37-8
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(photo-radical-curable resin composition containing epoxy resin)

IT 4865-00-3P 60813-12-9P 219631-61-5P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(preparation of triphenylmethane-type leuco dye for photo-radical-curable

10593612

resin)
IT 91-66-7, Diethylaniline 120-21-8 613-28-5 613-29-6, Dibutylaniline
2217-07-4, Dipropylaniline 90134-10-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of triphenylmethane-type leuco dye for
photo-radical-curable
resin)
IT 694491-73-1D, block, triblock
RL: POF (Polymer in formulation); TEM (Technical or engineered material
use); USES (Uses)
(styrene-butadiene rubber, Kraton D 1155; photo-radical-curable resin
composition containing epoxy resin)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Hodogaya Chemical Co Ltd; JP 02-58573 A 1990 CAPLUS
(2) Nitto Electric Industrial Co Ltd; JP 63-123038 A 1988 CAPLUS
(3) Tamura Kaken Kabushiki Kaisha; JP 09-34109 A 1997 CAPLUS
(4) The Japan Atomic Power Co; JP 2001242249 A 2001 CAPLUS
(5) The Japan Atomic Power Co; US 6524763 B1 2001 CAPLUS

=> D ALL L8 2

L8 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1999:45032 CAPLUS
DN 130:117363
ED Entered STN: 22 Jan 1999
TI Thermally imageable monochrome digital proofing product with high
contrast
and fast photospeed
IN Dessauer, Rolf; Caspar, Jonathan V.
PA E. I. Du Pont de Nemours & Co., USA
SO U.S., 19 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM G03C001-675
ICS G03C001-705; G03C001-73; G03C005-58
INCL 430017000
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
PI US 5858583	A	19990112	US 1997-888266	19970703
PRAI US 1997-888266		19970703		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
-----	-----	-----
US 5858583	ICM	G03C001-675
	ICS	G03C001-705; G03C001-73; G03C005-58
	INCL	430017000
	IPCI	G03C0001-675 [ICM,6]; G03C0001-705 [ICS,6];
G03C0001-73		[ICS,6]; G03C0005-58 [ICS,6]

IPCR B41M0005-30 [I,C*]; B41M0005-30 [N,A]; B41M0005-323 [N,A]; B41M0005-337 [I,A]; B41M0005-40 [N,C*]; B41M0005-40 [N,A]; B41M0005-46 [N,A]

NCL 430/017.000; 346/076.100; 346/135.100; 430/332.000; 430/338.000; 430/342.000; 430/343.000; 430/344.000; 430/944.000; 430/964.000; 503/201.000; 503/217.000; 503/223.000; 503/224.000

ECLA B41M005/337D; L41M; L41M; L41M

OS MARPAT 130:117363

AB Novel thermally imageable monochrome product compns., elements, and processes are disclosed. These compns. and elements characteristically have high contrast and fast imaging speeds. The thermally imageable compns. of this invention comprise (a) at least one hexaarylbiimidazole compound, (b) at least one leuco dye, (c) at least one acid-generating compound, (d) a polymeric binder, (e) optionally at least one UV stabilizer and/or at least one inhibitor of color formation, and, in certain embodiments, (f) at least one near IR-absorbing dye. These compns. have the propensity for affording, upon thermal imaging, highly colored images having high optical d. values. At the same time, background color is low in preferred compns. even after extensive exposure to ambient light. These compns. can be imagewise heated to effect color formation (i.e., generation of an image) or, in case of compns. containing at least one near IR-absorbing dye, can be imagewise exposed to near IR radiation from a laser or other device to effect color formation (i.e., generation of an image).

ST photothermog imaging compn IR color proof; thermog imaging compn IR color proof; hexaarylbiimidazole leuco dye photothermog imaging compn

IT Photothermographic copying
(IR-sensitive thermally imageable monochrome digital proofing compns. containing hexaarylbiimidazoles and leuco dyes)

IT Thermographic copying
(thermally imageable monochrome digital proofing compns. containing hexaarylbiimidazoles and leuco dyes)

IT Printing plates
(thermally imageable monochrome digital proofing compns. containing hexaarylbiimidazoles and leuco dyes for)

IT Polyvinyl butyrals
RL: TEM (Technical or engineered material use); USES (Uses)
(thermally imageable monochrome digital proofing compns. containing hexaarylbiimidazoles, leuco dyes and)

IT 603-48-5 4482-70-6 4550-36-1 4865-00-3 57104-59-3, Tris(N,N-dipropylaminophenyl)methane 60813-13-0 68582-45-6 138862-98-3 204857-03-4, Deuterotris(4-diethylaminophenyl)methane 204857-04-5, Deuterobis(4-diethylaminophenyl)(4-diethylamino-2-methylphenyl)methane 219631-61-5, Tris(N,N-dibutylaminophenyl)methane 219631-62-6, Deuterotris(4-dimethylaminophenyl)methane 219631-63-7, Deutero(4-diethylaminophenyl)bis(4-diethylamino-2-methylphenyl)methane
RL: TEM (Technical or engineered material use); USES (Uses)
(thermally imageable monochrome digital proofing compns. containing hexaarylbiimidazoles and)

IT 88-24-4, 2,2'-Methylenebis[6-(1,1-dimethylethyl)-4-ethylphenol] 92-43-3 118-75-2, uses 119-47-1, 2,2'-Methylenebis[6-(1,1-dimethylethyl)-4-

10593612

methylphenol] 128-37-0, uses 131-53-3,
2,2'-Dihydroxy-4-methoxybenzophenone 131-54-4,
4,4'-Dimethoxy-2,2'-dihydroxybenzophenone 131-55-5,
2,2',4,4'-Tetrahydroxybenzophenone 611-91-6 630-25-1 1707-67-1
3194-55-6 3710-84-7 5496-71-9 6542-67-2 17025-47-7 38615-39-3,
trans-3-Hydroxy-2-(p-diethylaminobenzyl)indanone 62354-98-7, PDBS-80
88878-49-3 95283-23-1 128433-68-1 219617-47-7,
2,2'-Dihydroxy-4,4'-dimethoxy-5,5'-di-tert-butylbenzophenone
RL: TEM (Technical or engineered material use); USES (Uses)
(thermally imageable monochrome digital proofing compns. containing
hexaarylbiimidazoles, leuco dyes and)
IT 1707-68-2 1741-29-3 1842-62-2 29777-36-4 77388-36-4
219631-64-8,
2,2'-Bis(1-naphthalenyl)-4,4',5.5'-tetrakis(3-methoxyphenyl)-1,1'-bi-1H-
imidazole 219631-65-9,
2,2'-Bis(1-naphthalenyl)-4,4'-bis(2-chlorophenyl)-
5,5'-bis(3,4-dimethoxyphenyl)-1,1'-bi-1H-imidazole
RL: TEM (Technical or engineered material use); USES (Uses)
(thermally imageable monochrome digital proofing compns. containing
leuco
dyes and)

RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Acker; US 5093492 1992 CAPLUS
- (2) Anon; JP 59-72438 1984 CAPLUS
- (3) Anon; JP 60-191238 1985 CAPLUS
- (4) Anon; JP 60-95430 1985 CAPLUS
- (5) Anon; JP 60-98433 1985 CAPLUS
- (6) Anon; EP 0243936 1987 CAPLUS
- (7) Anon; EP 335236 1989 CAPLUS
- (8) Anon; EP 0321923 B1 1992 CAPLUS
- (9) Anon; JP 05-229251 1993 CAPLUS
- (10) Anon; JP 05-301448 1993 CAPLUS
- (11) Anon; JP 07-228051 1995 CAPLUS
- (12) Anon; JP 07-32738 1995 CAPLUS
- (13) Anon; JP 08-39935 1996 CAPLUS
- (14) Bell; US 4551413 1985 CAPLUS
- (15) Cescon; US 3445234 1969
- (16) Cescon; US 3585038 1971 CAPLUS
- (17) Cescon; US 3615454 1971 CAPLUS
- (18) Cescon; US 3784557 1974 CAPLUS
- (19) Chambers; US 3479185 1969
- (20) Cruse; US 5407783 1995 CAPLUS
- (21) De Boer; US 4942141 1990 CAPLUS
- (22) De Boer; US 4973572 1990 CAPLUS
- (23) Dessauer; US 4311783 1982 CAPLUS
- (24) Ellis; US 5171650 1992 CAPLUS
- (25) Fabricius; US 5330884 1994
- (26) Fabricius; US 5440042 1995 CAPLUS
- (27) Fabricius; US 5536626 1996 CAPLUS
- (28) Fichter; US 3493376 1970 CAPLUS
- (29) Foley; US 5156938 1992 CAPLUS
- (30) Gelbart; US 4743091 1988
- (31) Holman; US 4634657 1987 CAPLUS
- (32) Isbrandt; US 4423139 1983 CAPLUS

10593612

(33) Kellogg; US 5019549 1991 CAPLUS
(34) Kitchin; US 4581325 1986 CAPLUS
(35) Laganis; US 4882265 1989 CAPLUS
(36) Lee; US 4356252 1982 CAPLUS
(37) Looney; US 3615481 1971 CAPLUS
(38) Mac Lachlan; US 3383212 1968 CAPLUS
(39) Mac Lachlan; US 3390996 1968
(40) Manos; US 3390995 1968 CAPLUS
(41) McKeeever; US 4298678 1981 CAPLUS
(42) Nakabayashi; US 4495020 1985 CAPLUS
(43) Saeki; US 4929530 1990 CAPLUS
(44) Saeki; US 4981769 1991
(45) Sato; US 4656121 1987 CAPLUS
(46) Sheets; US 4622286 1986 CAPLUS
(47) Simmons; US 5286604 1994 CAPLUS
(48) Vandusen; US 5146087 1992
(49) Vji-Ie; US 4332884 1982 CAPLUS
(50) Wada; US 4410621 1983 CAPLUS
(51) Wainer; US 3042515 1962 CAPLUS
(52) Wainer; US 3042516 1962
(53) Walker; US 3563750 1971 CAPLUS
(54) Washizu; US 4962009 1990 CAPLUS
(55) Wilson; US 3615567 1971 CAPLUS
(56) Yanagihara; US 5051333 1991 CAPLUS

=> D HIS

(FILE 'HOME' ENTERED AT 13:37:57 ON 02 FEB 2009)

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 02 FEB 2009

L1 1 S US20070191520/PN

FILE 'REGISTRY' ENTERED AT 13:39:35 ON 02 FEB 2009

L2 0 S -----STN ONLINE AND
RESULTS-----

L3 3 S 4865-00-3 OR 60813-12-9 OR 219631-61-5

FILE 'CAPLUS' ENTERED AT 13:40:49 ON 02 FEB 2009

L4 50 S L3

FILE 'REGISTRY' ENTERED AT 13:41:28 ON 02 FEB 2009

L5 1 S 60813-12-9

L6 1 S 219631-61-5

FILE 'CAPLUS' ENTERED AT 13:41:56 ON 02 FEB 2009

L7 6 S L5

L8 2 S L6

=> D ALL L7 1-6

L7 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2005:1154634 CAPLUS

DN 143:423084

ED Entered STN: 28 Oct 2005

10593612

TI Photo-radical-curable resin composition containing epoxy resin
IN Sugiki, Takanori; Nishida, Yuichi
PA Nichiban Company Limited, Japan
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM C08L063-00
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005100472	A1	20051027	WO 2004-JP4672	20040331
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	EP 1752494	A1	20070214	EP 2004-724799	20040331
	R:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LI, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR			
	US 20070191520	A1	20070816	US 2006-593612	20060921
PRAI	WO 2004-JP4672	W	20040331		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005100472	ICM	C08L063-00
	IPCI	C08L0063-00 [ICM,7]
	IPCR	C08L0063-00 [I,C*]; C08L0063-00 [I,A]; G03F0007-027 [I,C*]; G03F0007-027 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
EP 1752494	IPCI	C08L0063-00 [I,A]
	IPCR	C08L0063-00 [I,C]; C08L0063-00 [I,A]; G03F0007-027 [I,C*]; G03F0007-027 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
US 20070191520	IPCI	C08C0001-14 [I,A]; C08C0001-00 [I,C*]
	NCL	524/160.000

AB The composition, useful for coatings, adhesives, sealing compns., etc., comprises an epoxy resin and a photo-radical-curable resin, and a triphenylmethane-type leuco dye. After the resin composition is applied the cured state can be visually and easily ascertained in a short time. Thus, a composition comprising Shikoh UV 7000B (polyurethane acrylate) 100, Epikote 828 (epoxy resin) 50, Aerosil 200 (silica) 10, DICY 15 (epoxy curing agent) 3 and Darocur 1173 (Photo-radical polymerization initiator) 1 part was

10593612

mixed with 0.05% tris(p-N,N-diethylaminophenyl)methane, showing white color before UV irradiation and bluish purple color after UV irradiation, and no viscosity change after storage for 1 mo at 40°.

ST epoxy photo radical curable resin; triphenylmethane leuco dye photocurable resin

IT Polyurethanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(acrylic; photo-radical-curable resin composition containing epoxy resin)

IT Styrene-butadiene rubber, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(block, triblock, Kraton D 1155; photo-radical-curable resin composition containing epoxy resin)

IT Leuco dyes
(photo-radical-curable resin composition containing epoxy resin)

IT Epoxy resins, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(photo-radical-curable resin composition containing epoxy resin)

IT Polymerization
(photochem., radical; photo-radical-curable resin composition containing epoxy resin)

IT Adhesives
Coating materials
Sealing compositions
(photocurable; photo-radical-curable resin composition containing epoxy resin for)

IT Acrylic polymers, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(polyurethane-; photo-radical-curable resin composition containing epoxy resin)

IT 7631-86-9, Aerosil 200, uses
RL: MOA (Modifier or additive use); USES (Uses)
(colloidal; photo-radical-curable resin composition containing epoxy resin)

IT 60842-32-2, Aerosil R 972
RL: MOA (Modifier or additive use); USES (Uses)
(photo-radical-curable resin composition containing epoxy resin)

IT 27754-24-1 34962-82-8 868140-28-7 868140-37-8
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(photo-radical-curable resin composition containing epoxy resin)

IT 4865-00-3P 60813-12-9P 219631-61-5P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(preparation of triphenylmethane-type leuco dye for photo-radical-curable

10593612

resin)
IT 91-66-7, Diethylaniline 120-21-8 613-28-5 613-29-6, Dibutylaniline
2217-07-4, Dipropylaniline 90134-10-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of triphenylmethane-type leuco dye for
photo-radical-curable
resin)
IT 694491-73-1D, block, triblock
RL: POF (Polymer in formulation); TEM (Technical or engineered material
use); USES (Uses)
(styrene-butadiene rubber, Kraton D 1155; photo-radical-curable resin
composition containing epoxy resin)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Hodogaya Chemical Co Ltd; JP 02-58573 A 1990 CAPLUS
(2) Nitto Electric Industrial Co Ltd; JP 63-123038 A 1988 CAPLUS
(3) Tamura Kaken Kabushiki Kaisha; JP 09-34109 A 1997 CAPLUS
(4) The Japan Atomic Power Co; JP 2001242249 A 2001 CAPLUS
(5) The Japan Atomic Power Co; US 6524763 B1 2001 CAPLUS

L7 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1984:601526 CAPLUS
DN 101:201526
OREF 101:30407a,30410a
ED Entered STN: 25 Nov 1984
TI Radiation-sensitive imaging compositions
PA Eastman Kodak Co., USA
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC G03C001-727
ICA C07D209-48; C07D213-89; C07D215-58; C07D221-14
CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58190947	A	19831108	JP 1983-61498	19830407
	US 4425424	A	19840110	US 1982-390488	19820621
PRAI	US 1982-366886	A	19820408		
	US 1982-390488	A	19820621		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 58190947	IC	G03C001-727
	ICA	C07D209-48; C07D213-89; C07D215-58; C07D221-14
	IPCI	G03C0001-727 [ICM]; C07D0209-48 [ICA]; C07D0209-00 [ICA,C*]; C07D0213-89 [ICA]; C07D0213-00 [ICA,C*]; C07D0215-58 [ICA]; C07D0215-00 [ICA,C*]; C07D0221-14 [ICA]; C07D0221-00 [ICA,C*]
	IPCR	C07D0209-00 [I,C*]; C07D0209-48 [I,A]; C07D0213-00 [I,C*]; C07D0213-89 [I,A]; C07D0215-00 [I,C*]; C07D0215-58 [I,A]; C07D0221-00 [I,C*]; C07D0221-14 [I,A]; G03C0001-675 [I,C*]; G03C0001-675 [I,A]

10593612

US 4425424 IPCI G03C0001-52 [ICM]; G03C0001-68 [ICS]
IPCR C07D0209-00 [I,C*]; C07D0209-48 [I,A]; C07D0221-00
[I,C*]; C07D0221-14 [I,A]; G03C0001-73 [I,C*];
G03C0001-73 [I,A]
NCL 430/270.100; 430/281.100; 430/285.100; 430/286.100;
430/292.000; 430/332.000; 430/338.000; 430/342.000;
430/343.000; 430/920.000
ECLA C07D209/48D5A2; C07D221/14A; G03C001/73L; M07D; M07D
GI For diagram(s), see printed CA Issue.
AB Radiation sensitive imaging compns. contain a leuco dye having ≥ 1
removable H atom(s), removal of which produces a compound having
different
color from that of the leuco dye, and a photooxidizing agent I (A = 5- to
17-membered single or condensed ring; R = 5- to 10-membered hydrocarbon
or
heterocyclic ring) which reacts with the leuco dye upon irradiation The
imaging compns. may be added to photoresists and presensitized plates, so
that the resin patterns can be visually inspected easily. Thus,
1,4-di(β -hydroxyethoxy)cyclohexane-p-phenylenediacrylic acid
copolymer, polystyrene, 2-[bis-(2-furoyl)methylene]-1-methylnaphtho[1,2-
d]thiazoline, 2,6-di-tert-butylcresol,
dihydroanhydropiperidinohexosereductone,
4,4',4''-methylidene-tris(N,N-dipropylaniline), Monastral Red B, Modaflow
and N-benzenesulfonyloxyphthalimide (II) were mixed and coated on an
anodized Al support to give a presensitized lithog. plate. Imagewise
exposure of the plate resulted in visible images (i.e. print-out images)
having improved contrast over that of a control with
N-benzoyloxyphthalimide instead of II.
ST photochromic leuco dye photooxidizing agent; presensitized plate print
out
IT Photochromic substances
(leuco dye-photooxidizing agent mixts. as)
IT Resists
(photo-, containing photochromic compns.)
IT Lithographic plates
Printing plates
(presensitized, photosensitive resin composition containing
photochromic compns.
for)
IT 23928-87-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 5033-19-2 19361-97-8 19361-98-9 82649-28-3 88977-76-8
RL: USES (Uses)
(radiation-sensitive imaging compns. containing leuco dye and)
IT 101-61-1 60813-12-9 88997-60-8 92806-25-2 92806-26-3
92806-27-4
RL: USES (Uses)
(radiation-sensitive imaging compns. containing photooxidizing agent
and)
IT 524-38-9 7797-81-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzenesulfonyl chloride and chlorobenzenesulfonyl
chloride)
IT 98-09-9 98-60-2

10593612

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydroxyphthalimide and hydroxynaphthalimide)

L7 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1984:94555 CAPLUS

DN 100:94555

OREF 100:14212h,14213a

ED Entered STN: 12 May 1984

TI Dye-forming compositions

IN Altland, Henry W.; Ryan, Raymond W., Jr.; Senise, Phillip P., Jr.;
Lindstrom, Michael J.

PA Eastman Kodak Co., USA

SO U.S., 8 pp. Cont.-in-part of U.S. Ser. No. 366,886, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC G03C001-52; G03C001-68

INCL 430270000

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4425424	A	19840110	US 1982-390488	19820621
	CA 1179179	A1	19841211	CA 1982-416828	19821202
	JP 58190947	A	19831108	JP 1983-61498	19830407
PRAI	US 1982-366886	A2	19820408		
	US 1982-390488	A	19820621		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4425424	IC	G03C001-52; G03C001-68
	INCL	430270000
	IPCI	G03C0001-52 [ICM]; G03C0001-68 [ICS]
	IPCR	C07D0209-00 [I,C*]; C07D0209-48 [I,A]; C07D0221-00 [I,C*]; C07D0221-14 [I,A]; G03C0001-73 [I,C*]; G03C0001-73 [I,A]
	NCL	430/270.100; 430/281.100; 430/285.100; 430/286.100; 430/292.000; 430/332.000; 430/338.000; 430/342.000; 430/343.000; 430/920.000
	ECLA	C07D209/48D5A2; C07D221/14A; G03C001/73L; M07D; M07D
CA 1179179	IPCI	G03C0001-52 [ICM,3]
	IPCR	C07D0209-00 [I,C*]; C07D0209-48 [I,A]; C07D0221-00 [I,C*]; C07D0221-14 [I,A]; G03C0001-73 [I,C*]; G03C0001-73 [I,A]
JP 58190947	IPCI	G03C0001-727 [ICM]; C07D0209-48 [ICA]; C07D0209-00 [ICA,C*]; C07D0213-89 [ICA]; C07D0213-00 [ICA,C*]; C07D0215-58 [ICA]; C07D0215-00 [ICA,C*]; C07D0221-14 [ICA]; C07D0221-00 [ICA,C*]
	IPCR	C07D0209-00 [I,C*]; C07D0209-48 [I,A]; C07D0213-00 [I,C*]; C07D0213-89 [I,A]; C07D0215-00 [I,C*]; C07D0215-58 [I,A]; C07D0221-00 [I,C*]; C07D0221-14 [I,A]; G03C0001-675 [I,C*]; G03C0001-675 [I,A]

OS MARPAT 100:94555

AB A composition containing a leuco dye and an N-sulfonyloxy photooxidant provides a

visual print-out of the light exposure and is useful in lithog. plate preparation, metal working layouts, photoresists, and the like. The composition can

- be used alone or in combination with a photopolymer. Thus, an anodized and subbed Al support was coated with a composition containing 1,4-di-(β -hydroxyethoxy)cyclohexane-p-phenylenediacrylic acid polymer (19.48 weight% in 1,2-dichloroethane) 24.44, Piccolastic A-50 1.65, 2-[bis(2-furoyl)methylene]-1-methylnaphtho[1,2-d]thiazoline 0.14, 2,6-di-tert-butyl-p-cresol 0.19, dihydroanhydropiperidinohexose 0.02, 4,4',4''-methylidenetris(N,N-dipropylaniline) 0.23, Monastral Red B pigment (7.8%) 24.41, Modaflo (1%) 0.87, N-benzenesulfonyloxyphthalimide (photooxidant) 0.48, and 1,2-dichloroethane 198.06 g, imagewise exposed with 2000 W Xe lamp for 60 s, developed, and incubated 2 wk at 50° and 50% relative humidity. The resultant material showed a print-out d. and speed after incubation of 0.08 and 115, resp., vs. 0.12 and 107, resp., before incubation.
- ST leuco dye photooxidant photoimaging; lithog plate leuco dye photooxidant; photoresist leuco dye photooxidant
- IT Photoimaging compositions and processes
(containing photooxidant-leuco dye combination for dye images)
- IT Lithographic plates
(photopolymeric composition for fabrication of, containing leuco dye and photooxidant for improved printout densities)
- IT Resists
(photo-, photooxidant-leuco dye combination for)
- IT 53710-66-0
RL: USES (Uses)
(photoimaging composition containing leuco dye and photooxidant and)
- IT 5033-19-2 88977-76-8
RL: USES (Uses)
(photoimaging composition containing leuco dyes and)
- IT 1047-16-1 9003-53-6 63149-07-5
RL: USES (Uses)
(photoimaging composition containing photopolymer system and leuco dye and photooxidant and)
- IT 128-37-0, properties
RL: PRP (Properties)
(photoimaging composition containing photopolymer system and leuco dye and photooxidant and)
- IT 101-61-1 60813-12-9 88977-77-9 88987-11-5 88987-12-6
88997-60-8
RL: USES (Uses)
(photoimaging composition containing photopolymer system and photooxidant and)
- IT 19361-97-8P 19361-98-9P 82649-28-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and photoimaging applications of, in combination with leuco dyes)
- IT 121-44-8, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydroxyphthalimide and benzenesulfonyl chloride)

10593612

IT 524-38-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with triethylamine and benzenesulfonyl chloride)
IT 7797-81-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with triethylamine and chlorobenzenesulfonyl chloride)
IT 98-09-9 98-60-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with triethylamine and hydroxyphthalimide)

L7 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1979:213249 CAPLUS
DN 90:213249
OREF 90:33807a,33810a
ED Entered STN: 12 May 1984
TI Presensitized printing plate having a print-out image
IN Rauner, Frederick J.; Cunningham, Michael P.; Van Hanehem, Richard C.
PA Eastman Kodak Co., USA
SO U.S., 14 pp.
CODEN: USXXAM
DT Patent
LA English
IC G03C001-68
INCL 096091000N
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4139390	A	19790213	US 1977-767273	19770210
	CA 1075954	A1	19800422	CA 1977-278059	19770510
PRAI	US 1977-767273	A	19770210		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4139390	IC	G03C001-68
	INCL	096091000N
	IPCI	G03C0001-68 [ICM]
	IPCR	G03F0007-09 [I,C*]; G03F0007-105 [I,A]
	NCL	430/285.100; 430/167.000; 430/196.000; 430/197.000; 430/302.000; 430/919.000; 522/026.000; 522/027.000; 522/108.000
	ECLA	G03F007/105
CA 1075954	IPCI	G03C0001-68 [ICM]
	IPCR	G03F0007-09 [I,C*]; G03F0007-105 [I,A]

AB Presensitized lithog. plates providing a print-out image, which may be removed upon development, contain a photocrosslinkable unsatd. polymer, an essentially colorless leuco dye, and an organic azide sensitizer. The azide sensitizes the leuco dye print-out without decreasing the speed by more than 1 step. Thus, to a 10 mL portion of a solution containing 1,4-bis(β -hydroxyethoxy)cyclohexane-diethyl p-phenylenediacrylate polyester 40.0, 2-benzoylmethylene-1-methylnaphtho[1,2-d]thiazoline 3.2, benzoic acid 1.6, 2,6-di-tert-butyl-p-cresol 0.8 g, and PhCl 1.0 L was added cinnamoyl azide 5 and leuco crystal violet 5 mg. The resulting

10593612

 solution was coated on anodized Al at 100 rpm until dry and exposed to a
C
 arc UV source in a vacuum printing frame for 2 min to give an image with
 very good print-out intensity and 6 steps vs. very good print-out
 intensity and 2 steps for a control containing anthraquinone-2-sulfonyl
azide
 and faint print-out intensity and 6 steps for an azide-free control.
ST lithog plate printout image; azide sensitizer lithog plate printout;
leuco
 dye sensitizer lithog plate printout
IT Rosin
 RL: USES (Uses)
 (hydrogenated, developer compns. containing, for presensitized lithog.
 plates containing azide sensitizers and leuco dyes for print-out
images)
IT Azides
 RL: USES (Uses)
 (presensitized lithog. plates containing leuco dye and, for print-out
 images)
IT Dyes
 (leuco, presensitized lithog. plates containing azide sensitizer and,
for
 print-out images)
IT Lithographic plates
 (presensitized, containing azide sensitizer and leuco dye for
print-out
 image)
IT 56-81-5, uses and miscellaneous 96-48-0 102-71-6, uses and
 miscellaneous 127-25-3 7664-38-2, uses and miscellaneous 37208-27-8
 RL: USES (Uses)
 (developer compns. containing, for presensitized lithog. plates
containing
 azide sensitizers and leuco dyes for print-out images)
IT 603-48-5 4482-70-6 4865-00-3 60813-12-9 60813-14-1
 68582-45-6 70332-05-7 70421-86-2
 RL: USES (Uses)
 (presensitized lithog. plates containing azide sensitizers and, for
 print-out images)
IT 65-85-0, uses and miscellaneous 128-37-0, uses and miscellaneous
 1042-84-8 32630-58-3 57086-31-4
 RL: USES (Uses)
 (presensitized lithog. plates containing azide sensitizers, leuco
dyes,
 and, for print-out images)
IT 2158-14-7 26829-64-1 63210-42-4 63210-43-5
 RL: USES (Uses)
 (presensitized lithog. plates containing leuco dyes and, for print-out
 images)

L7 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1977:414260 CAPLUS
DN 87:14260
OREF 87:2181a,2184a
ED Entered STN: 12 May 1984
TI Photothermographic element, composition and process for producing a color

10593612

image from leuco dye
IN McGuckin, Hugh G.
PA Eastman Kodak Co., USA
SO U.S., 18 pp.
CODEN: USXXAM
DT Patent
LA English
IC G03C005-54
INCL 096029000D
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4022617	A	19770510	US 1976-650099	19760119
	CA 1039550	A1	19781003	CA 1974-213077	19741105
PRAI	US 1974-491713	A2	19740725		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4022617	IC	G03C005-54
	INCL	096029000D
	IPCI	G03C0005-54 [ICM]; G03C0007-00 [ICS]; G03C0001-40 [ICS]; G03C0001-02 [ICS]
	IPCR	G03C0001-498 [I,C*]; G03C0001-498 [I,A]
	NCL	430/203.000; 430/351.000; 430/542.000; 430/617.000
	ECLA	G03C001/498E1A
CA 1039550	IPCI	G03C0001-00 [ICM]; G03C0003-00 [ICS]; G03C0005-54 [ICS]
	IPCR	G03C0001-498 [I,C*]; G03C0001-498 [I,A]

AB A photothermog. composition for producing dye images is composed of a Ag halide

in association with an oxidation-reduction image-forming composition consisting of a Ag salt oxidizing agent, an organic reducing agent, a polymeric binder, and a

leuco dye which is oxidizable to form a dye image. Thus, a photothermog. layer consisting of a Ag(Br,I)-Ag stearate dispersion containing Ag 80, 2,6-dichloro-4-benzenesulfonamidophenol 47, N-hydroxy-1,8-naphthalimide 0.3, stearic acid 10, poly(vinyl butyral) binder 20, and Li stearate 3 mg/929 cm² of support was coated with a 0.5% solution of malachite green, dried, imagewise exposed for 2s with a 60-W W lamp at 15 in., and heated on a metal block at 100° for 5s to give a high contrast dye image in the exposed areas. Upon removal of the photothermog. layer by rinsing,

a dye image was revealed in the polyethylene layer on the paper support.

ST color photothermog leuco dye

IT Vinyl acetal polymers

RL: USES (Uses)

(butyrals, binders, for photothermog. copying composition)

IT Photothermography

(color, photosensitive compns. containing oxidizable leuco dyes for)

IT 112-85-6 4485-12-5

RL: USES (Uses)

(photothermog. copying compns. containing leuco dye and, for dye image

10593612

formation)
IT 57-11-4, uses and miscellaneous 824-69-1 2489-05-6 2966-50-9
3507-99-1 51767-45-4 58689-51-3
RL: USES (Uses)
(photothermog. copying compns. containing leuco dye and, for dye
image
formation)
IT 7797-81-1
RL: USES (Uses)
(photothermog. copying compns. containing leuco dye and, for dye image
formation)
IT 548-62-9 569-64-2 603-48-5 4865-00-3 15008-36-3 60813-12-9
60813-14-1 63084-94-6 63286-63-5
RL: USES (Uses)
(photothermog. copying compns. containing, for dye image formation)

L7 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1976:569693 CAPLUS
DN 85:169693
OREF 85:27053a,27056a
ED Entered STN: 12 May 1984
TI Photothermographic formation of color images
IN McGuckin, Hugh G.
PA Eastman Kodak Co., USA
SO Fr. Demande, 31 pp.
CODEN: FRXXBL
DT Patent
LA French
IC G03C001-02
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2280104	A1	19760220	FR 1975-23236	19750725
	FR 2280104	B1	19771209		
	CA 1039550	A1	19781003	CA 1974-213077	19741105
PRAI	US 1974-491713	A	19740725		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
FR 2280104	IC	G03C001-02
	IPCI	G03C0001-02 [ICM]
	IPCR	G03C0001-498 [I,C*]; G03C0001-498 [I,A]
CA 1039550	IPCI	G03C0001-00 [ICM]; G03C0003-00 [ICS]; G03C0005-54 [ICS]
	IPCR	G03C0001-498 [I,C*]; G03C0001-498 [I,A]

AB Triphenylmethane dye derivs. are the leuco dyes used in photothermog.
compns. containing a Ag salt oxidant and a reductant, and which upon
oxidation
form the color image. Thus, an alc. solution (5/10,000 by volume) of
malachite
green was coated on a photothermog. layer (on a resin-sized paper
support)
containing Ag stearate, Ag(Br,I),
2,6-dichloro-4-benzenesulfonamidophenol,

10593612

N-hydroxy-1,8-naphthalimide, stearic acid, Li stearate, and poly(vinyl butyral), imagewise exposed using a W lamp, heated at 100° for 5 sec to develop the color image, and rinsed with alc. to remove the photothermog. layer and give a color image in the resin layer (polyethylene containing TiO2) on the paper support.

ST photothermog triphenylmethane dye colorant

IT Photothermography
(triphenylmethane leuco dye derivs. as color former in, image formation
in paper support resin sizing layer by)

IT 548-62-9 569-64-2 603-48-5 4865-00-3 6310-57-2 15008-36-3
60813-12-9 60813-13-0 60813-14-1
RL: USES (Uses)
(color former, in photothermog. image forming assembly)

IT 13463-67-7, uses and miscellaneous
RL: USES (Uses)
(polyethylene sizing layer containing, photothermog. image formation
in)

IT 9002-88-4
RL: USES (Uses)
(sizing layer of, containing titanium dioxide, for photothermog. image
formation)

=> D HIS

(FILE 'HOME' ENTERED AT 13:37:57 ON 02 FEB 2009)

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 02 FEB 2009

L1 1 S US20070191520/PN

FILE 'REGISTRY' ENTERED AT 13:39:35 ON 02 FEB 2009

L2 0 S -----STN ONLINE AND
RESULTS-----

L3 3 S 4865-00-3 OR 60813-12-9 OR 219631-61-5

FILE 'CAPLUS' ENTERED AT 13:40:49 ON 02 FEB 2009

L4 50 S L3

FILE 'REGISTRY' ENTERED AT 13:41:28 ON 02 FEB 2009

L5 1 S 60813-12-9
L6 1 S 219631-61-5

FILE 'CAPLUS' ENTERED AT 13:41:56 ON 02 FEB 2009

L7 6 S L5
L8 2 S L6

=> S L4 NOT L7 NOT L8

L9 43 L4 NOT L7 NOT L8

=> S L9 AND FREE

1427385 FREE

L10 4 L9 AND FREE

=> D ALL 1-4

L10 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
 AN 1966:73482 CAPLUS
 DN 64:73482
 OREF 64:13746g-h,13747a
 ED Entered STN: 22 Apr 2001
 TI Voltammetric oxidation of triphenylmethane dyes at platinum in liquid sulfur dioxide
 AU Hall, D. A.; Sakuma, M.; Elving, P. J.
 CS Univ. of Michigan, Ann Arbor
 SO Electrochimica Acta (1966), 11(3), 337-50
 CODEN: ELCAAV; ISSN: 0013-4686
 DT Journal
 LA English
 CC 15 (Electrochemistry)
 AB The electrochem. oxidation-reduction behavior at the Pt electrode in liquid SO₂
 of 4 triphenylmethane dyes (Crystal Violet, Ethyl Violet, malachite green, and Brilliant Green), the leuco form of one (leuco Crystal Violet), a possible oxidation product (N,N,N',N'-tetramethylbenzidine), and K salts of the anions present in the dyes (chloride and bisulfate) was studied with voltammographic (polarographic) and cyclic voltammetric techniques. The oxidation of the dyes in liquid SO₂ is quite different from that observed in acidic aqueous solution. Voltammography revealed no cathodic waves before solution discharge at -0.2 to -0.4 v. All the compds. give well-defined anodic waves. Each dye gives one anodic wave corresponding to oxidation of the organic cation or carbonium ion produced on dissociation and 1 or 2 waves corresponding to oxidation of its anion. The cyclic voltammetric patterns are much more complex. Each of the dyes shows a 1-electron oxidation-reduction wave, which is probably due to oxidation of the carbonium ion to a free radical via attack on a lone electron pair on one N, followed by reduction of the free radical.
 IT Oxidation
 (electrochem. or electrolytic, of triphenylmethane dyes, in liquid SO₂)
 IT Dyes
 (triphenylmethane, electrolytic oxidation-reduction of, in liquid SO₂)
 IT 2390-59-2
 (Derived from data in the 7th Collective Formula Index (1962-1966))
 IT 4865-00-3, C.I. Basic Violet 3, leuco form
 (electrolytic oxidation-reduction of)
 IT 366-29-0, Benzidine, N,N,N',N'-tetramethyl- 603-48-5, Aniline, 4,4',4''-methylidynetris[N,N-dimethyl-
 (oxidation-reduction (electrolytic) of)
 IT 548-62-9, C.I. Basic Violet 3 569-64-2, C.I. Basic Green 4 633-03-4, C.I. Basic Green 1 4865-00-3, C.I. Basic Violet 4, leuco
 (oxidation-reduction (electrolytic) of, in liquid SO₂)

10593612

L10 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1964:437719 CAPLUS

DN 61:37719

OREF 61:6570b-c

ED Entered STN: 22 Apr 2001

TI Photographic colored print-out films

PA Horizons Inc.

SO 9 pp.

DT Patent

LA Unavailable

IC G03C

CC 11 (Radiation Chemistry and Photochemistry)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	GB 959033		19640527	GB 1960-30737	19600906
	DE 1201175			DE	
PRAI	US		19590922		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
-----	-----	-----
GB 959033	IC	G03C
	IPCI	G03C
	IPCR	G03C0001-675 [I,C*]; G03C0001-675 [I,A]

AB Coatings containing a resinous binder having O and H in the mol. such as
a

cellulose ester, polyethylene glycol, an acrylic, poly(vinyl alc.), or
poly(vinyl acetate) (I); an organic halogen compound such as CBr₄, that
will

yield a free radical on exposure to ultraviolet light; and an
acid-base indicator material, such as Ethyl Violet, Congo red, and Orange
IV, are useful in photocopying, recording, and amateur photography.

E.g.,

a typical coating contains a mixture of 10 cc. of 10% by weight of I in
a mixture

of Me₂CO 40, toluene 20, and MeOH 40 parts; 2 cc. of 2% by weight
dispersion

of Congo red in Me₂CO; and 5 cc. of 25% by volume solution of CBr₄ in
Me₂CO.

This is coated onto a film of heat stabilized transparent poly(vinyl
chloride). After drying, the film is exposed to a 300-w. high-pressure

Hg

lamp at a distance of 10 in. for 3 sec. The exposed areas develop a deep
blue-grey color while the unexposed areas remain a light red.

IT Indicators (for titration)

(acid-base, reactions with CBr₄ in photographic color print-out films)

IT Photoduplication

Photography, color

(print-out, with acid-base indicator and organic halogen compound)

IT 2390-59-2

(Derived from data in the 7th Collective Formula Index (1962-1966))

IT 554-73-4, C.I. Acid Orange 5 573-58-0, C.I. Direct Red 28

4865-00-3, C.I. Basic Violet 4, leuco

(in photographic color print-out films)

10593612

L10 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1964:68691 CAPLUS
DN 60:68691
OREF 60:12138g-h
ED Entered STN: 22 Apr 2001
TI Radical ion intermediates in the electroreduction of triphenylmethane dyes
AU Miller, Terry; Lamb, Barbara; Adams, Ralph N.
CS Univ. of Kansas, Lawrence
SO Journal of Electroanalytical Chemistry (1959-1966) (1963), 6(4), 326-7
CODEN: JEACAX; ISSN: 0368-1874
DT Journal
LA Unavailable
CC 46 (Dyes)
AB Existence of radical intermediates in the reduction of several triphenylmethane dyes was proved by their electron paramagnetic resonance spectra. Under equivalent conditions, however, the expected spectra from the reduction of similar triphenylmethane dyes were not found. Certain solvation effects concerning the reduction of the dyes were also substantiated.
IT Free radical
(formation of, in electroredn. of triphenylmethane dyes)
IT Spectra, visible and ultraviolet
(of ditriazinylstilbenedisulfonic acid)
IT Magnetic resonance absorption
(of triarylmethane dyes, radicals in)
IT Dyes
(triphenylmethane, electroredn. of, radical ion intermediates in)
IT Alphazurine G
(electro reduction of, radical ion intermediates in)
IT 2390-59-2 6654-50-8
(Derived from data in the 7th Collective Formula Index (1962-1966))
IT 75-01-4, Ethylene, chloro-
(polymerization of, with F compds. by γ -rays)
IT 632-99-5, C.I. Basic Violet 14 633-03-4, C.I. Basic Green 1
3521-06-0,
C.I. Basic Blue 1 4865-00-3, C.I. Basic Violet 4, leuco
(reduction (electro-) of, radical ion intermediates in)
IT 569-64-2, C.I. Basic Green 4
(reduction of, electro, radical ion intermediates in)
IT 548-62-9, C.I. Basic Violet 3
(reduction of, electro-, radical ion intermediates in)

L10 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1956:30178 CAPLUS
DN 50:30178
OREF 50:6057d-i,6058a
ED Entered STN: 22 Apr 2001
TI Leuco triarylmethane derivatives
IN Balon, Walter J.; Stallmann, Otto
PA E. I. du Pont de Nemours & Co.
DT Patent
LA Unavailable
CC 25 (Dyes and Textiles Chemistry)

10593612

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2726252		19551206	US 1954-452218	19540825

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2726252	IPCR	C09B0011-00 [I,C*]; C09B0011-14 [I,A]
	NCL	552/109.000; 101/DIG.029; 552/111.000; 552/114.000

AB Leuco tris(p-aminophenyl)methanes, wherein the 3 amino groups are all of tertiary nature, can be prepared essentially free from the corresponding colored triarylmethane dye from the appropriate

benzaldehyde

and 2 mole equivs. of a suitable dialkylaniline when the condensation is carried out in the presence of urea, nitro-urea, biuret, or biurea and the

further presence of a strong, nonoxidizing acid. p-Et₂NC₆H₄CHO (I)

106.5,

urea 54, PhNEt₂ 197, and iso-PrOH 400, treated slowly at 25-8° with 93% H₂SO₄ 139, the mixture refluxed 24 hrs. with stirring, diluted with cold

H₂O 200, and cooled to 25-30°, the mixture treated slowly at 25-30° with 30% aqueous NaOH 271 and then with NaHSO₄ 35 in H₂O 175, decolorized with 30% aqueous NaOH 20, treated with a 50% choline

solution 6 in

MeOH and a 31.6% solution (II) 9.5 in EtOH of the reaction product from epichlorohydrin, NH₄OH, and NaOH, the mixture steam distilled, and the

oily

upper layer of the distillation residue separated and allowed to stand at room temperature

gave leuco ethyl violet (III) 274 parts. Crude III 100 dissolved in boiling EtOH 900 containing a 50% choline solution 5 in MeOH, filtered, and

cooled slowly to 15°, the precipitate filtered, and the residue washed with EtOH 80 parts containing the choline solution 5-6 drops and dried at 50° gave pure III 72.1 parts, m. 95-6°. The combined alc.

filtrate from the above purification diluted with H₂O 250 parts and cooled

to 15° gave an addnl. 4.6 parts. The crude III can also be purified by heating with EtOH 2 parts to the b.p., filtering, and cooling with stirring to 30°. When the same condensation was carried out under N the yield of III was 83%; without urea the yield of III was only 8.7%. The III, when stabilized with choline and microcryst. wax showed excellent stability to photooxidation. III prepared in the usual manner

but

stabilized with [PhCH₂NMe₃]OH (IV) and then recrystd. from EtOH 1100

parts

containing 36% IV 1 part gave colorless cubic crystals, m. 96-6.5°. I 18, urea 6.4, o-MeC₆H₄NEt(CH₂CH₂OH) 34, iso-PrOH 95, and 96% H₂SO₄ 10.9 parts condensed in the usual manner and stabilized with IV gave similarly a stable leuco dye. A 1% solution in EtOH showed a pH of 8.6 at 25°. Oxidation with chloranil in dioxane gave a dye of bluish violet shade. PhNMe(CH₂CH₂CN) 42, I 22, urea 7.5, iso-PrOH 60, and 93% H₂SO₄ 13.3 parts gave similarly an oily viscous leuto dye 67 parts which dissolved readily in dilute mineral acids to give pale-yellow clear solns. I 44.3, urea 18,

10593612

PhNEt(CH₂Ph) 108, 96% H₂SO₄ 40.8, and iso-PrOH 160 stirred 20 hrs. at 83-4°, diluted with iso-PrOH 80 and H₂O 90, cooled to 45°, neutralized with 30% aqueous NaOH 110, treated with 36% aqueous IV 2.5, and cooled with stirring to room temperature, the viscous oily layer extracted with hot (70°) H₂O 500 containing IV 2, and dissolved in C₆H₆ 280 parts, and the solution dried and evaporated under N gave {p-[Et(PhCH₂)N]C₆H₄}₂CHC₆H₄NEt₂-p 140 parts. A similar run with PhNHCONH₂ 75 parts instead of urea gave 68.8% leuco dye. The leuco compds. are useful as colorless hectographic dyes or for impact printing.

IT Ink
(hectograph, triarylmethane dyes for)

IT Dyes
(triarylmethane leuco forms)

IT Ethanol, 2,2'-[(p-diethylaminobenzylidene)bis[(2-methyl-p-phenylone)(ethylimino)]]di-
RL: PREP (Preparation)

IT 443-44-7 445-21-6 7589-30-2
(Derived from data in the 5th Collective Formula Index (1947-1956))

IT 4865-00-3P, Aniline, 4,4',4''-methylidynetris[N,N-diethyl-859301-51-2P, Propionitrile, 3,3'-[(p-diethylaminobenzylidene)bis[p-phenylene(methylimino)]]di-
RL: PREP (Preparation)
(preparation of)

IT 74-82-8, Methane
(triaryl derivs., as leuco dyes)

=> D ALL 1-4

L10 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1966:73482 CAPLUS
DN 64:73482
OREF 64:13746g-h,13747a
ED Entered STN: 22 Apr 2001
TI Voltammetric oxidation of triphenylmethane dyes at platinum in liquid sulfur dioxide
AU Hall, D. A.; Sakuma, M.; Elving, P. J.
CS Univ. of Michigan, Ann Arbor
SO Electrochimica Acta (1966), 11(3), 337-50
CODEN: ELCAAV; ISSN: 0013-4686
DT Journal
LA English
CC 15 (Electrochemistry)
AB The electrochem. oxidation-reduction behavior at the Pt electrode in liquid SO₂ of 4 triphenylmethane dyes (Crystal Violet, Ethyl Violet, malachite green, and Brilliant Green), the leuco form of one (leuco Crystal Violet), a possible oxidation product (N,N,N',N'-tetramethylbenzidine), and K salts of the anions present in the dyes (chloride and bisulfate) was studied with

10593612

voltammographic (polarographic) and cyclic voltammetric techniques. The oxidation of the dyes in liquid SO₂ is quite different from that observed in acidic aqueous solution. Voltammetry revealed no cathodic waves before solution discharge at -0.2 to -0.4 v. All the compds. give well-defined anodic waves. Each dye gives one anodic wave corresponding to oxidation of the organic cation or carbonium ion produced on dissociation and 1 or 2 waves corresponding to oxidation of its anion. The cyclic voltammetric patterns are much more complex. Each of the dyes shows a 1-electron oxidation-reduction wave, which is probably due to oxidation of the carbonium ion to a free radical via attack on a lone electron pair on one N, followed by reduction of the free radical.

IT Oxidation
(electrochem. or electrolytic, of triphenylmethane dyes, in liquid SO₂)
IT Dyes
(triphenylmethane, electrolytic oxidation-reduction of, in liquid SO₂)
IT 2390-59-2
(Derived from data in the 7th Collective Formula Index (1962-1966))
IT 4865-00-3, C.I. Basic Violet 3, leuco form
(electrolytic oxidation-reduction of)
IT 366-29-0, Benzidine, N,N,N',N'-tetramethyl- 603-48-5, Aniline,
4,4',4''-methylidynetris[N,N-dimethyl-
(oxidation-reduction (electrolytic) of)
IT 548-62-9, C.I. Basic Violet 3 569-64-2, C.I. Basic Green 4 633-03-4,
C.I. Basic Green 1 4865-00-3, C.I. Basic Violet 4, leuco
(oxidation-reduction (electrolytic) of, in liquid SO₂)

L10 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1964:437719 CAPLUS

DN 61:37719

OREF 61:6570b-c

ED Entered STN: 22 Apr 2001

TI Photographic colored print-out films

PA Horizons Inc.

SO 9 pp.

DT Patent

LA Unavailable

IC G03C

CC 11 (Radiation Chemistry and Photochemistry)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 959033		19640527	GB 1960-30737	19600906
	DE 1201175			DE	
PRAI	US		19590922		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
GB 959033	IC	G03C
	IPCI	G03C

10593612

IPCR G03C0001-675 [I,C*]; G03C0001-675 [I,A]

AB Coatings containing a resinous binder having O and H in the mol. such as
a cellulose ester, polyethylene glycol, an acrylic, poly(vinyl alc.), or
poly(vinyl acetate) (I); an organic halogen compound such as CBr₄, that
will yield a free radical on exposure to ultraviolet light; and an
acid-base indicator material, such as Ethyl Violet, Congo red, and Orange
IV, are useful in photocopying, recording, and amateur photography.
E.g., a typical coating contains a mixture of 10 cc. of 10% by weight of I in
a mixture of Me₂CO 40, toluene 20, and MeOH 40 parts; 2 cc. of 2% by weight
dispersion of Congo red in Me₂CO; and 5 cc. of 25% by volume solution of CBr₄ in
Me₂CO.
This is coated onto a film of heat stabilized transparent poly(vinyl
chloride). After drying, the film is exposed to a 300-w. high-pressure
Hg lamp at a distance of 10 in. for 3 sec. The exposed areas develop a deep
blue-grey color while the unexposed areas remain a light red.

IT Indicators (for titration)
(acid-base, reactions with CBr₄ in photographic color print-out films)

IT Photoduplication
Photography, color
(print-out, with acid-base indicator and organic halogen compound)

IT 2390-59-2
(Derived from data in the 7th Collective Formula Index (1962-1966))

IT 554-73-4, C.I. Acid Orange 5 573-58-0, C.I. Direct Red 28
4865-00-3, C.I. Basic Violet 4, leuco
(in photographic color print-out films)

L10 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1964:68691 CAPLUS

DN 60:68691

OREF 60:12138g-h

ED Entered STN: 22 Apr 2001

TI Radical ion intermediates in the electroreduction of triphenylmethane
dyes

AU Miller, Terry; Lamb, Barbara; Adams, Ralph N.

CS Univ. of Kansas, Lawrence

SO Journal of Electroanalytical Chemistry (1959-1966) (1963), 6(4), 326-7
CODEN: JEACAX; ISSN: 0368-1874

DT Journal

LA Unavailable

CC 46 (Dyes)

AB Existence of radical intermediates in the reduction of several
triphenylmethane dyes was proved by their electron paramagnetic resonance
spectra. Under equivalent conditions, however, the expected spectra
from the reduction of similar triphenylmethane dyes were not found. Certain
solvation effects concerning the reduction of the dyes were also substantiated.

IT Free radical
(formation of, in electroredn. of triphenylmethane dyes)

10593612

IT Spectra, visible and ultraviolet
(of ditriazinylstilbenedisulfonic acid)
IT Magnetic resonance absorption
(of triarylmethane dyes, radicals in)
IT Dyes
(triphenylmethane, electroredn. of, radical ion intermediates in)
IT Alphazurine G
(electro reduction of, radical ion intermediates in)
IT 2390-59-2 6654-50-8
(Derived from data in the 7th Collective Formula Index (1962-1966))
IT 75-01-4, Ethylene, chloro-
(polymerization of, with F compds. by γ -rays)
IT 632-99-5, C.I. Basic Violet 14 633-03-4, C.I. Basic Green 1
3521-06-0,
C.I. Basic Blue 1 4865-00-3, C.I. Basic Violet 4, leuco
(reduction (electro-) of, radical ion intermediates in)
IT 569-64-2, C.I. Basic Green 4
(reduction of, electro, radical ion intermediates in)
IT 548-62-9, C.I. Basic Violet 3
(reduction of, electro-, radical ion intermediates in)

L10 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1956:30178 CAPLUS

DN 50:30178

OREF 50:6057d-i,6058a

ED Entered STN: 22 Apr 2001

TI Leuco triarylmethane derivatives

IN Balon, Walter J.; Stallmann, Otto

PA E. I. du Pont de Nemours & Co.

DT Patent

LA Unavailable

CC 25 (Dyes and Textiles Chemistry)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2726252	----	19551206	US 1954-452218	19540825

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2726252	IPCR	C09B0011-00 [I,C*]; C09B0011-14 [I,A]
	NCL	552/109.000; 101/DIG.029; 552/111.000; 552/114.000

AB Leuco tris(p-aminophenyl)methanes, wherein the 3 amino groups are all of tertiary nature, can be prepared essentially free from the corresponding colored triarylmethane dye from the appropriate

benzaldehyde

and 2 mole equivs. of a suitable dialkylaniline when the condensation is carried out in the presence of urea, nitro-urea, biuret, or biurea and the

further presence of a strong, nonoxidizing acid. p-Et₂NC₆H₄CHO (I)

106.5,

urea 54, PhNEt₂ 197, and iso-PrOH 400, treated slowly at 25-8° with 93% H₂SO₄ 139, the mixture refluxed 24 hrs. with stirring, diluted with cold

H₂O 200, and cooled to 25-30°, the mixture treated slowly at 25-30° with 30% aqueous NaOH 271 and then with NaHSO₄ 35 in H₂O 175,

10593612

decolorized with 30% aqueous NaOH 20, treated with a 50% choline solution 6 in MeOH and a 31.6% solution (II) 9.5 in EtOH of the reaction product from epichlorohydrin, NH₄OH, and NaOH, the mixture steam distilled, and the oily upper layer of the distillation residue separated and allowed to stand at room temperature gave leuco ethyl violet (III) 274 parts. Crude III 100 dissolved in boiling EtOH 900 containing a 50% choline solution 5 in MeOH, filtered, and cooled slowly to 15°, the precipitate filtered, and the residue washed with EtOH 80 parts containing the choline solution 5-6 drops and dried at 50° gave pure III 72.1 parts, m. 95-6°. The combined alc. filtrate from the above purification diluted with H₂O 250 parts and cooled to 15° gave an addnl. 4.6 parts. The crude III can also be purified by heating with EtOH 2 parts to the b.p., filtering, and cooling with stirring to 30°. When the same condensation was carried out under N the yield of III was 83%; without urea the yield of III was only 8.7%. The III, when stabilized with choline and microcryst. wax showed excellent stability to photooxidation. III prepared in the usual manner but stabilized with [PhCH₂NMe₃]OH (IV) and then recrystd. from EtOH 1100 parts containing 36% IV 1 part gave colorless cubic crystals, m. 96-6.5°. I 18, urea 6.4, o-MeC₆H₄NEt(CH₂CH₂OH) 34, iso-PrOH 95, and 96% H₂SO₄ 10.9 parts condensed in the usual manner and stabilized with IV gave similarly a stable leuco dye. A 1% solution in EtOH showed a pH of 8.6 at 25°. Oxidation with chloranil in dioxane gave a dye of bluish violet shade. PhNMe(CH₂CH₂CN) 42, I 22, urea 7.5, iso-PrOH 60, and 93% H₂SO₄ 13.3 parts gave similarly an oily viscous leuco dye 67 parts which dissolved readily in dilute mineral acids to give pale-yellow clear solns. I 44.3, urea 18, PhNEt(CH₂Ph) 108, 96% H₂SO₄ 40.8, and iso-PrOH 160 stirred 20 hrs. at 83-4°, diluted with iso-PrOH 80 and H₂O 90, cooled to 45°, neutralized with 30% aqueous NaOH 110, treated with 36% aqueous IV 2.5, and cooled with stirring to room temperature, the viscous oily layer extracted with hot (70°) H₂O 500 containing IV 2, and dissolved in C₆H₆ 280 parts, and the solution dried and evaporated under N gave {p-[Et(PhCH₂)N]C₆H₄}₂CHC₆H₄NEt₂-p 140 parts. A similar run with PhNHCONH₂ 75 parts instead of urea gave 68.8% leuco dye. The leuco compds. are useful as colorless hectographic dyes or for impact printing.

IT Ink
(hectograph, triarylmethane dyes for)

IT Dyes
(triarylmethane leuco forms)

IT Ethanol, 2,2'-[(p-diethylaminobenzylidene)bis[(2-methyl-p-phenylone)(ethylimino)]]di-
RL: PREP (Preparation)

IT 443-44-7 445-21-6 7589-30-2
(Derived from data in the 5th Collective Formula Index (1947-1956))

IT 4865-00-3P, Aniline, 4,4',4''-methylidynetris[N,N-diethyl-

10593612

859301-51-2P, Propionitrile, 3,3'-[(p-diethylaminobenzylidene)bis[p-phenylene(methylimino)]]di-
RL: PREP (Preparation)
(preparation of)
IT 74-82-8, Methane
(triaryl derivs., as leuco dyes)

=> D HIS

(FILE 'HOME' ENTERED AT 13:37:57 ON 02 FEB 2009)

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 02 FEB 2009
L1 1 S US20070191520/PN

FILE 'REGISTRY' ENTERED AT 13:39:35 ON 02 FEB 2009
L2 0 S -----STN ONLINE AND
RESULTS-----

L3 3 S 4865-00-3 OR 60813-12-9 OR 219631-61-5

FILE 'CAPLUS' ENTERED AT 13:40:49 ON 02 FEB 2009
L4 50 S L3

FILE 'REGISTRY' ENTERED AT 13:41:28 ON 02 FEB 2009
L5 1 S 60813-12-9
L6 1 S 219631-61-5

FILE 'CAPLUS' ENTERED AT 13:41:56 ON 02 FEB 2009
L7 6 S L5
L8 2 S L6
L9 43 S L4 NOT L7 NOT L8
L10 4 S L9 AND FREE

=> S L4 AND CATIONIC
148469 CATIONIC
L11 3 L4 AND CATIONIC

=> D ALL 1-3

L11 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1966:407728 CAPLUS
DN 65:7728
OREF 65:1423f-h
ED Entered STN: 22 Apr 2001
TI Association of adsorbed aromatic solutes
AU Giles, C. H.; Easton, I. A.; McKay, R. B.; Patel, C. C.; Shah, N. B.;
Smith, D.
CS Univ. Strathclyde, Glasgow, UK
SO Transactions of the Faraday Society (1966), 62(7), 1963-75
CODEN: TFSOA4; ISSN: 0014-7672
DT Journal
LA English
CC 4 (Surface Chemistry and Colloids)
AB Adsorption of a number of mono-ionic aromatic solutes, mainly dyes (both
anionic and cationic) on a variety of finely divided solids,

e.g., specific samples of alumina, silica, titania, graphite, etc., was measured from isotherms determined at room temperature By comparing the adsorptions with the specific surfaces of the solids determined by other methods most of the solutes are clearly adsorbed to a far greater extent than necessary to cover the surface as a monolayer of monodisperse aromatic ions. The factor by which the adsorption exceeds the theoretical value for such a monolayer (termed the coverage factor (C.F.)) can be calculated for different assumed orientations of the adsorbed aromatic ions; that based on flat orientation is statistically the most highly significant and reveals that the coverage factor rises with the cube of the ionic weight of the aromatic ion. Aggregation nos. for some of the dyes in aqueous (buffer) solutions are available and agree with the C.F. values for adsorption from the same resp. solutions. In all cases the solutes are adsorbed as aromatic ionic micelles in which the ions have face-to-face packing. The C.F. for each solute is considered a maximum value. In practice, any lower value down to zero may be obtained if some or all of the surface of the solid has low reactivity by virtue of its history.

IT Molecular association
 (of adsorbed aromatic compds., monolayer coverage and)

IT Adsorption
 (of organic compds. (aromatic) by solids, surface and)

IT Yeasts
 (organic compds. adsorbed on, mol. association of, monolayer coverage and)

IT Adsorbed substances
 (organic compds., on solids, mol. association of, monolayer coverage and)

IT 2390-59-2 6408-78-2 10405-79-5
 (Derived from data in the 7th Collective Formula Index (1962-1966))

IT 477-73-6, C.I. Basic Red 2
 (adsorbed on solid adsorbents, mol. Association of, monolayer coverage and)

IT 2786-71-2, 2-Anthracenesulfonic acid,
 1-amino-4-anilino-9,10-dihydro-9,10-dioxo-
 (adsorbed on solid adsorbents, mol. association of monolayer coverage and)

IT 60-09-3, C.I. Solvent Yellow 1 61-73-4, C.I. Basic Blue 9 84-48-0,
 2-Anthracenesulfonic acid, 9,10-dihydro-9,10-dioxo- 98-11-3,
 Benzenesulfonic acid 121-57-3, Sulfanilic acid 1658-56-6, C.I. Acid
 Red 88 2390-60-5, C.I. Basic Blue 7 2402-42-8, Pseudocyanine chloride
 2580-56-5, C.I. Basic Blue 26 2636-31-9, Ammonium,
 [m-[[4-[(2-hydroxy-1-naphthyl)azo]-o-tolyl]azo]phenyl]trimethyl, chloride
 7726-05-8, Benzenesulfonic acid, p-[[2-hydroxy-3-(phenylcarbamoyl)-1-naphthyl]azo]-
 20766-49-8, Quinolinium,
 1-ethyl-2-[(1-ethyl-2(1H)-quinolylidene)methyl]-
 (adsorbed on solid adsorbents, mol. association of, monolayer coverage and)

IT 2636-31-9, Janus Red

10593612

(adsorbed on solids, mol. association of, monolayer coverage and)
IT 7440-69-9P, Bismuth
RL: PREP (Preparation)
(extraction of, from aqueous chlorides by amine solns. in diethylbenzene)
IT 120-18-3, 2-Naphthalenesulfonic acid
(mol. association of adsorbed, monolayer coverage and)
IT 548-62-9, C.I. Basic Violet 3 632-99-5, C.I. Basic Violet 14
4865-00-3, C.I. Basic Violet 4, leuco
(mol. association of, adsorbed on solid adsorbents, monolayer coverage and)
IT 471-34-1, Calcium carbonate 1344-28-1, Aluminum oxide 7631-86-9, Silica 7782-42-5, Graphite 13463-67-7, Titanium oxide, TiO2
(organic compds. adsorbed on, mol. association of, monolayer coverage and)

L11 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1966:37623 CAPLUS

DN 64:37623

OREF 64:7031b-f

ED Entered STN: 22 Apr 2001

TI Relation between substantia granulofilamentosa and crinoma. Effect of various cationic substances on the demonstration on basophil structures in reticulocytes

AU Wittekind, D.; Rentsch, G.

CS Hoffmann-La Roche, Basel, Switz.

SO Zeitschrift fuer Zellforschung und Mikroskopische Anatomie (1965), 68(2), 217-54

CODEN: ZZACAG; ISSN: 0044-3794

DT Journal

LA German

CC 60 (Biochemical Methods)

AB This is the 1st of 3 studies on the relation between substantia granulofilamentosa and crinoma. Using the blood of phenylhydrazine-poisoned guinea pigs, 57 cationic dyes of various chemical structure and selected basic substances of nondye character

were tested for their suitability to precipitate the substantia granulofilamentosa. Attention is paid to the various types of ppts. in order to find out whether they show individual morphologic features. Of 57 dyes, 36 (most of which are derivs. of heterocyclic anhracene) are suitable for the demonstration of the substantia, granulofilamentosa.

The

group of dyes, which for the first time have been used successfully for the demonstration of reticulocytes, includes: methyl green, Toluidine Blue, pseudoisocyanine, neutral violet, and Amethyst Violet. After treatment with certain alkaloids in high concns. (especially quinine) a reticular basophil structure is precipitated It shows, however, not the same d.

and affinity for dyes as the ppts. obtained with suitable dyes.

According

to their chemical structure, the majority of pos. dyes belongs to the heterocyclic anthracenes. The reasons for neg. results in the demonstration of reticulocytes are discussed. Quant. relations between dye concentration and number of reticulocytes are tested with equimolar solns. of

Acridine Orange, 9-aminoacridine, Neutral Red, and quinine. The efficacy of these 4 substances decreases with decreasing concentration in the order given

above. If blood cells are treated with a concentrated solution (1:100) of suitable

dyes, certain dye-dependent peculiarities are observed in the precipitated

substantia granulofilamentosa, some of which are described in detail. Some pos. dyes (concentration 1:2000) cause the formation of vacuoles in reticulocytes, in direct relation to the formation of the crinoma. If used at this concentration most of the dyes are concentrated in vacuoles. Pyronine is

suitable only for the demonstration of substantia granulofilamentosa. Dyes that belong to the Gentian Violet group are not suitable for the precipitation of substantia granulofilamentosa in frog erythrocytes. For comparison, the same group of dyes was tested for its affinity to the Heinz bodies, which chemical are very different from the substantia granulofilamentosa. Heinz bodies are intensely stained with dyes belonging to the Gentian Violet group and by oxazine dyes. A rather intensive primary fluorescence is observed in Heinz bodies; if several fluorochromes are used, they show secondary fluorescence. The relation between the chemical structure of the dyes used in this study and their effect on reticulocytes is discussed. 121 references.

IT Dyes

(heterocyclic anthracene derivs., in detection of substantia granulofilamentosa in reticulocytes)

IT Reticulocytes

(substantia granulofilamentosa, detection of, dyes in)

IT Ammonium, [4-[(4,6-diamino-m-tolyl)imino]-2,5-cyclohexadien-1-ylidene]dimethyl
(in reticulocyte detection)

IT 81-93-6 92-32-0 97-26-7 531-55-5 531-57-7 989-38-8 2390-59-2
2869-83-2 3562-38-7 3562-46-7 4712-70-3 5409-37-0

(Derived from data in the 7th Collective Formula Index (1962-1966))

IT 61-73-4, C.I. Basic Blue 9 83-89-6, Acridine,
6-chloro-9-[[4-(diethylamino)-1-methylbutyl]amino]-2-methoxy- 90-45-9,
Acridine, 9-amino- 92-26-2, Acridine, 3,6-diamino-2,7-dimethyl-
92-31-9, C.I. Basic Blue 17 92-62-6, Acridine, 3,6-diamino- 130-95-0,
Quinine 477-73-6, C.I. Basic Red 2 531-55-5, 3H-Phenothiazine,
7-(dimethylamino)-3-(methylimino)-, hydrochloride 548-62-9, C.I. Basic
Violet 3 553-24-2, C.I. Basic Red 5 569-64-2, C.I. Basic Green 4
581-64-6, 3H-Phenothiazine, 7-amino-3-imino-, hydrochloride 633-03-4,
C.I. Basic Green 1 1787-57-1, 3H-Phenoxazine,
7-(diethylamino)-3-imino-8-methyl-, hydrochloride 1837-57-6, Lactic
acid, compound with 6,9-diamino-2-ethoxyacridine (1:1) 1934-16-3, C.I.
Basic Blue 24 2150-48-3, Ammonium,
[6-(diethylamino)-3H-xanthen-3-ylidene]diethyl, chloride 2381-85-3,

C.I.

Basic Blue 12 2465-27-2, C.I. Basic Yellow 2 2465-29-4,
3H-Xanthen-6-amine, N-methyl-3-(methylimino)-, hydrochloride 2679-01-8,
C.I. Basic Green 5 4215-95-6, Acridine, 3,6-diamino-2,7,9-trimethyl-,
hydrochloride 4865-00-3, C.I. Basic Violet 4, leuco 5153-57-1,
Acridine, 3-amino-6-(dimethylamino)-2-methyl- 7682-83-9, Benzoic acid,
o-[6-(ethylamino)-3-(ethylimino)-2,7-dimethyl-3H-xanthen-9-yl]-, ethyl
ester hydrochloride 8004-86-2, Hofmann's Violet 10390-24-6,

10593612

Phenazinium, 3-(diethylamino)-7-[[4-(dimethylamino)phenyl]azo]-5-phenyl-
16177-82-5, Phenazinium, 3,7-diamino-5-phenyl- 20766-49-8, Quinolinium,
1-ethyl-2-[(1-ethyl-2(1H)-quinolylydene)methyl]- 47646-52-6,
Phenazinium, 3,7-bis(diethylamino)-5-phenyl- 65589-70-0, Acriflavine
101015-54-7, Phenazine, 3-amino-7-(dimethylamino)-2-[p-
(dimethylamino)anilino]-, hydrochloride 106384-14-9, 3H-Phenothiazine,
3-imino-7-(methylamino)-, hydrochloride
(in reticulocyte detection)
IT 494-38-2, Acridine, 3,6-bis(dimethylamino)-
(in reticulocyte detection.)
IT 17817-77-5, Ammonium, [6-(dimethylamino)-3H-xanthen-3-ylidene]-dimethyl
(in substantia granulofilamentosa detection)

L11 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1965:6027 CAPLUS
DN 62:6027
OREF 62:1110c-d
ED Entered STN: 22 Apr 2001
TI Association of adsorbed aromatic ions
AU Easton, I. A.; Giles, C. H.; McKay, R. B.
CS Univ. Strathclyde, Glasgow, UK
SO Chemistry & Industry (London, United Kingdom) (1964), (45), 1863-4
CODEN: CHINAG; ISSN: 0009-3068
DT Journal
LA English
CC 4 (Surface Chemistry and Colloids)
AB Adsorption on graphite, alumina, silica, titania, and CaCO₃ by aromatic
sulfonic acids and cationic and anionic dyes is related directly
to mol. weight The amount taken up exceeded that for formation of a
unimol.
layer. The phenomenon is discussed.
IT Ions
(adsorption of, mol. weight and)
IT Adsorbed substances
(dyes and sulfonic acids, mol. association of, mol. weight in
relation to)
IT Molecular weights
(mol. association of adsorbed dyes and sulfonic acids in relation to)
IT Dyes
Sulfonic acids
(mol. association of adsorbed, mol. weight and)
IT Adsorption
(of dyes and sulfonic acids, mol. weight in relation to)
IT Ammonium, [m-[[4-[(2-hydroxy-1-naphthyl)azo]-o-tolyl]azo]phenyl]trimethyl
(mol. association of adsorbed, mol. weight and)
IT 2636-31-9
(Derived from data in the 7th Collective Formula Index (1962-1966))
IT 471-34-1, Calcium carbonate 1344-28-1, Aluminum oxide 7631-86-9,
Silica 7782-42-5, Graphite 13463-67-7, Titanium oxide, TiO₂
(adsorption by, of dyes and sulfonic acids, mol. weight in relation
to)
IT 61-73-4, C.I. Basic Blue 9 84-48-0, 2-Anthracenesulfonic acid,
9,10-dihydro-9,10-dioxo- 98-11-3, Benzenesulfonic acid 120-18-3,
2-Naphthalenesulfonic acid 121-57-3, Sulfanilic acid 477-73-6, C.I.
Basic Red 2 1658-56-6, C.I. Acid Red 88 2390-60-5, C.I. Basic Blue 7

10593612

2402-42-8, Pseudocyanine chloride 2580-56-5, C.I. Basic Blue 26
2786-71-2, 2-Anthracenesulfonic acid,
1-amino-4-anilino-9,10-dihydro-9,10-dioxo- 4865-00-3, C.I. Basic
Violet 4, leuco 95197-58-3, Aniline, (phenylazo)-
(mol. association of adsorbed, mol. weight and)
IT 548-62-9, C.I. Basic Violet 3 632-99-5, C.I. Basic Violet 14
(mol. association of, adsorbed, mol. weight and)

=> D HIS

(FILE 'HOME' ENTERED AT 13:37:57 ON 02 FEB 2009)

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 02 FEB 2009
L1 1 S US20070191520/PN

FILE 'REGISTRY' ENTERED AT 13:39:35 ON 02 FEB 2009
L2 0 S -----STN ONLINE AND
RESULTS-----
L3 3 S 4865-00-3 OR 60813-12-9 OR 219631-61-5

FILE 'CAPLUS' ENTERED AT 13:40:49 ON 02 FEB 2009
L4 50 S L3

FILE 'REGISTRY' ENTERED AT 13:41:28 ON 02 FEB 2009
L5 1 S 60813-12-9
L6 1 S 219631-61-5

FILE 'CAPLUS' ENTERED AT 13:41:56 ON 02 FEB 2009
L7 6 S L5
L8 2 S L6
L9 43 S L4 NOT L7 NOT L8
L10 4 S L9 AND FREE
L11 3 S L4 AND CATIONIC

=> S L4 NOT L11 NOT L7 NOT L8
L12 40 L4 NOT L11 NOT L7 NOT L8

=> S L12 NOT L10
L13 36 L12 NOT L10

=> D ALL 1-36

L13 ANSWER 1 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2008:946452 CAPLUS
DN 149:225942
ED Entered STN: 08 Aug 2008
TI Diaminotriarylmethane dyes for hot-melt inks
IN Banning, Jeffrey H.
PA Xerox Corporation, USA
SO U.S. Pat. Appl. Publ., 25pp.
CODEN: USXXCO
DT Patent
LA English
INCL 427256000; 106031290; 106031300

10593612

CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20080187664	A1	20080807	US 2007-702818	20070206
	EP 1958993	A1	20080820	EP 2008-150829	20080130
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, AL, BA, MK, RS				
	JP 2008189926	A	20080821	JP 2008-22353	20080201
PRAI	US 2007-702818	A	20070206		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 20080187664	INCL	427256000; 106031290; 106031300
	IPCI	C09D0011-12 [I,A]; B05D0005-00 [I,A]
	NCL	427/256.000; 106/031.290; 106/031.300
EP 1958993	IPCI	C09D0011-00 [I,A]; C09B0011-00 [I,A]; C09B0069-00 [I,A]
JP 2008189926	IPCI	C09D0011-00 [I,A]; C09B0069-06 [I,A]; C09B0069-00 [I,C*]; C09B0011-14 [I,A]; C09B0011-00 [I,C*]; B41J0002-01 [I,A]; B41M0005-00 [I,A]
	FTERM	2C056/EA04; 2C056/EA11; 2C056/EA13; 2C056/FC02; 2C056/FD02; 2H186/BA10; 2H186/DA14; 2H186/FB05; 2H186/FB29; 2H186/FB31; 2H186/FB53; 4H056/BA02; 4H056/BB01; 4H056/BC01; 4H056/BD01; 4J039/AB12; 4J039/BC03; 4J039/BC33; 4J039/BC54; 4J039/BE05; 4J039/GA24

AB 4,4'-Diaminotriphenylmethane derivative salts with waxy counter ions are manufactured for use in phase-change inks. A typical dye was manufactured by

2,6-dimethylaniline with 2,6-dichlorobenzaldehyde, oxidation of the resulting leuco version of the basic dye, reaction of a solution of the oxidized leuco

dye with NaOH, and reaction of the resulting carbinol with dodecylbenzenesulfonic acid.

ST diaminotriarylmethane dye waxy counter ion manuf hot melt ink; diaminotetramethyldichloro triphenylmethylium dodecylbenzenesulfonate dye manuf hot melt ink

IT Fatty acids, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (C40-48, Unacid 700, reaction products, with C-36 dimer acid-ethylenediamine copolymer, ink binder; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks)

IT Ink-jet printing

(diaminotriarylmethane dyes having waxy counter ions for hot-melt inks for jet printing)

IT Fatty acids, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (dimer acids, C18, polymers, with ethylenediamine and fatty acids, ink

10593612

- binder; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks)
- IT Resin acids
RL: TEM (Technical or engineered material use); USES (Uses)
(esters, ink film-forming component; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks)
- IT Alcohols, uses
Amides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(fatty, ink film-forming component; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks)
- IT Inks
(hot-melt; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks)
- IT Ionomers
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(ink film-forming component; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks)
- IT Fatty acids, uses
Paraffin waxes, uses
Sulfonamides
Tall oil rosin
Waxes
RL: TEM (Technical or engineered material use); USES (Uses)
(ink film-forming component; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks)
- IT Polyamides, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(ink film-forming component; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks for jet printing)
- IT Urethanes
RL: TEM (Technical or engineered material use); USES (Uses)
(ink film-forming component; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks for jet printing)
- IT Hydrocarbon waxes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(microcryst., ink film-forming component; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks)
- IT Dyes
(triarylmethane; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks)
- IT Amides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(waxes, ink film-forming component; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks for jet printing)
- IT 72812-39-6P
RL: IMF (Industrial manufacture); PRPH (Prophetic); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(control; diaminotriarylmethane dyes having waxy counter ions for hot-melt inks)
- IT 107-15-3DP, Ethylenediamine, polymers with C-36 dimer acid and fatty acids
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM

10593612

(Technical or engineered material use); PREP (Preparation); USES (Uses)
(diaminotriarylmethane dyes having waxy counter ions for hot-melt
inks)
IT 166024-58-4P, Unilin X 1070 1042740-32-8P 1042978-85-7P
1043906-38-2P
RL: IMF (Industrial manufacture); PRPH (Prophetic); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)
(diaminotriarylmethane dyes having waxy counter ions for hot-melt
inks)
IT 1042740-23-7P 1042740-31-7P 1042978-84-6P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(diaminotriarylmethane dyes having waxy counter ions for hot-melt
inks)
IT 191488-59-2
RL: TEM (Technical or engineered material use); USES (Uses)
(ink binder precursor; diaminotriarylmethane dyes having waxy counter
ions for hot-melt inks)
IT 872210-52-1P, Abitol E; IPDI copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(ink binder; diaminotriarylmethane dyes having waxy counter ions for
hot-melt inks)
IT 9010-77-9, Acrylic acid-ethylene copolymer 24937-78-8, Ethylene-vinyl
acetate copolymer 26713-18-8, Acrylic acid-ethylene-vinyl acetate
copolymer
RL: POF (Polymer in formulation); TEM (Technical or engineered material
use); USES (Uses)
(ink film-forming component; diaminotriarylmethane dyes having waxy
counter ions for hot-melt inks)
IT 596-49-6P 4865-00-3P 64365-65-7P 65151-59-9P 79118-65-3P
1042740-22-6P 1042740-28-2P 1042740-30-6P
RL: IMF (Industrial manufacture); PRPH (Prophetic); RCT (Reactant); PREP
(Preparation); RACT (Reactant or reagent)
(precursor; diaminotriarylmethane dyes having waxy counter ions for
hot-melt inks)
IT 83-38-5, 2,6-Dichlorobenzaldehyde 87-62-7, 2,6-Dimethylaniline
91-66-7, N,N-Diethylaniline 120-21-8, 4-Diethylaminobenzaldehyde
579-66-8, 2,6-Diethylaniline 24544-04-5, 2,6-Diisopropylaniline
RL: RCT (Reactant); RACT (Reactant or reagent)
(precursor; diaminotriarylmethane dyes having waxy counter ions for
hot-melt inks)
IT 9002-88-4, Polyethylene
RL: POF (Polymer in formulation); TEM (Technical or engineered material
use); USES (Uses)
(waxes, ink film-forming component; diaminotriarylmethane dyes having
waxy counter ions for hot-melt inks)

L13 ANSWER 2 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2008:946369 CAPLUS
DN 149:226098
ED Entered STN: 08 Aug 2008
TI Phase change inks containing colorant compounds
IN Banning, Jeffrey H.
PA Xerox Corporation, USA

10593612

SO U.S. Pat. Appl. Publ., 20pp.

CODEN: USXXCO

DT Patent

LA English

INCL 347099000; 106031290; 106031600

CC 42-12 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20080186371	A1	20080807	US 2007-702929	20070206
	EP 1958992	A1	20080820	EP 2008-150179	20080111
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, AL, BA, MK, RS				
	JP 2008189924	A	20080821	JP 2008-19011	20080130
PRAI	US 2007-702929	A	20070206		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 20080186371	INCL	347099000; 106031290; 106031600
	IPCI	C09D0011-00 [I,A]; G01D0011-00 [I,A]
	NCL	347/099.000; 106/031.290; 106/031.600
EP 1958992	IPCI	C09D0011-00 [I,A]; C09B0011-00 [I,A]; C09B0069-02 [I,A]; C09B0069-04 [I,A]; C09B0069-00 [I,C*]
JP 2008189924	IPCI	C09D0011-00 [I,A]; B41M0005-00 [I,A]; B41J0002-01 [I,A]; C09B0069-02 [N,A]; C09B0069-00 [N,C*]; C09B0011-12 [N,A]; C09B0011-00 [N,C*]; C09B0023-00 [N,A]; C09B0029-50 [N,A]; C09B0029-00 [N,C*]
	FTERM	2C056/EA04; 2C056/FC02; 2H186/AB15; 2H186/BA08; 2H186/DA18; 2H186/FB05; 2H186/FB18; 2H186/FB48; 2H186/FB53; 4H056/BA02; 4H056/BB01; 4H056/BC01; 4H056/BD01; 4H056/BF02E; 4H056/BF26F; 4H056/CA01; 4H056/CC02; 4H056/CD08; 4H056/CE02; 4H056/FA01; 4J039/BB01; 4J039/BC07; 4J039/BC36; 4J039/BE04; 4J039/BE05; 4J039/BE12; 4J039/CA09; 4J039/EA44; 4J039/EA46; 4J039/GA24

AB Phase change inks comprising a carrier and a colorant composition including a

basic dye component and an acid dye component providing an internal salt composition wherein at least one of the basic dye component, the acid dye component, or both the basic dye component and the acid dye component comprises a waxy moiety.

ST colorant phase change ink

IT Fatty acids, uses

RL: POF (Polymer in formulation); USES (Uses)

(C40-48, UNICID 700; phase change inks containing colorant compds.)

IT Ionomers

Polyamides, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(carrier; phase change inks containing colorant compds.)

IT Fatty acids, uses

Paraffin waxes, uses

Sulfonamides

Tall oil rosin

10593612

Waxes
RL: TEM (Technical or engineered material use); USES (Uses)
(carrier; phase change inks containing colorant compds.)
IT Resin acids
RL: TEM (Technical or engineered material use); USES (Uses)
(esters, carrier; phase change inks containing colorant compds.)
IT Alcohols, uses
Amides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(fatty, carrier; phase change inks containing colorant compds.)
IT Inks
(hot-melt; phase change inks containing colorant compds.)
IT Hydrocarbon waxes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(microcryst., carrier; phase change inks containing colorant compds.)
IT Dyes
(phase change inks containing colorant compds.)
IT Amides, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(wax, carrier; phase change inks containing colorant compds.)
IT 9002-88-4 9010-77-9 24937-78-8 26713-18-8, Ethylene/vinyl
acetate/acrylic acid copolymer
RL: POF (Polymer in formulation); TEM (Technical or engineered material
use); USES (Uses)
(carrier; phase change inks containing colorant compds.)
IT 1043455-81-7P 1043455-90-8P
RL: IMF (Industrial manufacture); PRPH (Prophetic); PREP (Preparation)
(phase change inks containing colorant compds.)
IT 596-49-6P 4865-00-3P 79118-65-3P 79124-48-4P 1042740-22-6P
1042741-06-9P 1043455-62-4P 1043455-74-8P 1043456-52-5P
RL: IMF (Industrial manufacture); PRPH (Prophetic); RCT (Reactant); PREP
(Preparation); RACT (Reactant or reagent)
(phase change inks containing colorant compds.)
IT 13276-08-9, KEMAMIDE S-180 867155-37-1, Abitol E
RL: POF (Polymer in formulation); PRPH (Prophetic); USES (Uses)
(phase change inks containing colorant compds.)
IT 83-38-5, 2,6-Dichloro benzaldehyde 91-66-7, N,N-Diethylaniline
120-21-8, 4-Diethylamino benzaldehyde 579-66-8, 2,6-Diethyl aniline
113755-53-6 1043455-50-0
RL: PRPH (Prophetic); RCT (Reactant); RACT (Reactant or reagent)
(phase change inks containing colorant compds.)
IT 112-96-9, Stearyl isocyanate
RL: RCT (Reactant); RACT (Reactant or reagent)
(phase change inks containing colorant compds.)
IT 1042741-05-8 1043455-41-9
RL: TEM (Technical or engineered material use); USES (Uses)
(phase change inks containing colorant compds.)

L13 ANSWER 3 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2008:946366 CAPLUS
DN 149:226008
ED Entered STN: 08 Aug 2008
TI Basic dye compounds containing waxy moieties
IN Banning, Jeffrey H.
PA Xerox Corporation, USA

10593612

SO U.S. Pat. Appl. Publ., 16pp.

CODEN: USXXCO

DT Patent

LA English

INCL 106031290; 106031600

CC 42-6 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20080184911	A1	20080807	US 2007-702892	20070206
	EP 1956052	A2	20080813	EP 2008-150139	20080110
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, AL, BA, MK, RS				
	JP 2008189923	A	20080821	JP 2008-19010	20080130
PRAI	US 2007-702892	A	20070206		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 20080184911	INCL	106031290; 106031600
	IPCI	C09D0011-00 [I,A]
	NCL	106/031.290; 106/031.600
EP 1956052	IPCI	C09B0069-04 [I,A]; C09B0069-00 [I,C*]; C09B0067-22 [I,A]; C09B0067-00 [I,C*]; C09D0011-00 [I,A]
JP 2008189923	IPCI	C09B0069-02 [I,A]; C09B0069-00 [I,C*]; C09B0011-00 [I,A]; B41M0005-00 [I,A]; B41J0002-01 [I,A]; C09B0023-00 [I,A]; C09B0029-50 [I,A]; C09B0029-00 [I,C*]; C09D0011-00 [N,A]
	FTERM	2C056/EA13; 2C056/FC01; 2C056/FD02; 2H186/BA10; 2H186/DA14; 2H186/FB05; 2H186/FB28; 2H186/FB53; 4H056/BA02; 4H056/BB01; 4H056/BC01; 4H056/BD01; 4J039/BE04; 4J039/BE05; 4J039/CA09; 4J039/EA44; 4J039/GA24

AB A composition including a basic dye component (e.g., a substituted trityl compound containing amino groups) and an acid dye component providing an internal salt composition wherein at least one of the basic dye component, the

acid dye component, or both the basic dye component and the acid dye component comprises a waxy moiety.

ST dye waxy ink

IT Dyes

Inks

(basic dye compds. containing waxy moieties)

IT 1043455-81-7P 1043455-90-8P

RL: IMF (Industrial manufacture); PRPH (Prophetic); PREP (Preparation)

(basic dye compds. containing waxy moieties)

IT 596-49-6P 4865-00-3P 79118-65-3P 79124-48-4P 1042740-22-6P

1042741-06-9P 1043455-62-4P 1043455-74-8P 1043456-52-5P

RL: IMF (Industrial manufacture); PRPH (Prophetic); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(basic dye compds. containing waxy moieties)

IT 1042741-05-8P 1043455-41-9P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(basic dye compds. containing waxy moieties)

10593612

IT 83-38-5, 2,6-Dichloro benzaldehyde 91-66-7, N,N-Diethylaniline
112-96-9, Stearyliscyanate 120-21-8, 4-Diethylamino benzaldehyde
372-09-8, Cyanoacetic acid 579-66-8, 2,6-Diethyl aniline 113755-53-6
1043455-50-0

RL: PRPH (Prophetic); RCT (Reactant); RACT (Reactant or reagent)
(basic dye compds. containing waxy moieties)

L13 ANSWER 4 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2008:946365 CAPLUS

DN 149:226007

ED Entered STN: 08 Aug 2008

TI Basic dyes containing waxy moieties for ink

IN Banning, Jeffrey H.

PA Xerox Corporation, USA

SO U.S. Pat. Appl. Publ., 21pp.

CODEN: USXXCO

DT Patent

LA English

INCL 106031290; 106031130

CC 42-6 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20080184910	A1	20080807	US 2007-702890	20070206
	EP 1956054	A2	20080813	EP 2008-150833	20080130
	R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, AL, BA, MK, RS				
	JP 2008189925	A	20080821	JP 2008-22352	20080201
PRAI	US 2007-702890	A	20070206		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 20080184910	INCL	106031290; 106031130
	IPCI	C09D0011-00 [I,A]
	NCL	106/031.290; 106/031.130
EP 1956054	IPCI	C09B0069-06 [I,A]; C09B0069-00 [I,C*]; C09D0011-00 [I,A]
JP 2008189925	IPCI	C09B0069-06 [I,A]; C09B0069-00 [I,C*]; C09B0011-14 [I,A]; C09D0011-00 [I,A]; B41J0002-01 [I,A]; C09B0011-00 [I,A]
	FTERM	2C056/FC02; 2C056/FD02; 4H056/BA02; 4H056/BB01; 4H056/BC01; 4H056/BD01; 4J039/BB01; 4J039/BE05; 4J039/CA09; 4J039/GA24

AB A composition comprises a basic dye component (e.g., a substituted trityl compound containing amine groups) and a counter ion comprising a waxy moiety.

ST waxy dye ink

IT Dyes

(basic dyes containing waxy moieties)

IT 1042740-25-9P 1042740-26-0P 1042740-32-8P

RL: IMF (Industrial manufacture); PRPH (Prophetic); PREP (Preparation)
(basic dyes containing waxy moieties)

IT 596-49-6P 4865-00-3P 79118-65-3P 79124-48-4P 1042740-22-6P
1042740-28-2P 1042740-29-3P 1042740-30-6P

10593612

RL: IMF (Industrial manufacture); PRPH (Prophetic); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(basic dyes containing waxy moieties)
IT 1042740-23-7P 1042740-31-7P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(basic dyes containing waxy moieties)
IT 83-38-5, 2,6-Dichloro benzaldehyde 87-62-7, 2,6-Dimethyl aniline
91-66-7, N,N-Diethyl aniline 120-21-8, 4-Diethylamino benzaldehyde
579-66-8, 2,6-Diethyl aniline 24544-04-5, 2,6-Diisopropyl aniline
RL: PRPH (Prophetic); RCT (Reactant); RACT (Reactant or reagent)
(basic dyes containing waxy moieties)

L13 ANSWER 5 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:794423 CAPLUS

DN 145:222853

ED Entered STN: 11 Aug 2006

TI Organic semiconductor materials, organic thin film transistors, field-effect transistors (FET), and switching elements

IN Tanaka, Tatsuo

PA Konica Minolta Holdings, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 30pp.

CODEN: JKXXAF

DT Patent

LA Japanese

CC 76-3 (Electric Phenomena)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006210475	A	20060810	JP 2005-17898	20050126
PRAI	JP 2005-17898		20050126		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006210475	IPCI	H01L0051-05 [I,A]; H01L0029-786 [I,A]; H01L0029-66 [I,C*]
	IPCR	H01L0051-05 [I,C]; H01L0051-05 [I,A]; H01L0029-66 [I,C]; H01L0029-786 [I,A]
	FTERM	5F110/AA01; 5F110/AA05; 5F110/AA14; 5F110/BB02; 5F110/CC01; 5F110/CC03; 5F110/CC05; 5F110/CC07; 5F110/DD01; 5F110/DD02; 5F110/DD05; 5F110/EE01; 5F110/EE02; 5F110/EE03; 5F110/EE04; 5F110/EE07; 5F110/EE08; 5F110/EE42; 5F110/EE43; 5F110/EE44; 5F110/FF01; 5F110/FF02; 5F110/FF03; 5F110/FF09; 5F110/FF23; 5F110/FF27; 5F110/FF28; 5F110/FF29; 5F110/GG05; 5F110/GG25; 5F110/GG28; 5F110/GG29; 5F110/GG42; 5F110/HK01; 5F110/HK02; 5F110/HK03; 5F110/HK04; 5F110/HK07; 5F110/HK10; 5F110/HK32; 5F110/HK33; 5F110/NN72; 5F110/QQ06; 5F110/QQ14

AB Organic semiconductors containing compds. having a dye skeleton and that are not

organic complexes are claimed. Preferably, the compds. are DR_n (D = dye skeleton; R = dissolving unit; n = integer of ≥1), (poly)methine dyes, cyanine dyes, merocyanine dyes, oxonol dyes, styryl dyes, (hetero)arylidene dyes, azo dyes, or azomethine dyes. Organic thin film

10593612

transistors, field-effect transistors (FET), and switching elements comprising the said semiconductors are also claimed. The materials show long service life.

ST org dye semiconductor material; switching element org semiconductor;
field effect transistor org semiconductor; thin film transistor org semiconductor

IT Azo dyes
Cyanine dyes
(organic dye semiconductors for TFT, FET, and switching elements)

IT Semiconductor materials
(organic dyes; organic dye semiconductors for TFT, FET, and switching elements)

IT Electric switching
Field effect transistors
Thin film transistors
(organic semiconductors for; organic dye semiconductors for TFT, FET, and switching elements)

IT Dyes
(organic; organic dye semiconductors for TFT, FET, and switching elements)

IT 4051-63-2 4865-00-3 27981-68-6 75955-76-9 457606-90-5
904665-40-3 904665-41-4 904665-42-5 904665-43-6 904665-44-7
904665-45-8 904665-46-9 904665-47-0 904665-48-1 904665-49-2
904665-50-5
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(organic semiconductors; organic dye semiconductors for TFT, FET, and switching elements)

L13 ANSWER 6 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2004:680653 CAPLUS
DN 141:197392
ED Entered STN: 20 Aug 2004
TI Photosensitive image forming material containing leuco dye, photo-oxidizing agent, and reducing agent
IN Matsumoto, Takayuki; Kito, Hirokazu; Mitsuo, Hirofumi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03F007-004
ICS B05D001-30; B05D007-24; G03C001-675; G03C001-74; G03F007-16
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004233614	A	20040819	JP 2003-21577	20030130
PRAI	JP 2003-21577		20030130		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
-----	-----	-----

10593612

JP 2004233614 ICM G03F007-004
ICS B05D001-30; B05D007-24; G03C001-675; G03C001-74;
G03F007-16
IPCI G03F0007-004 [ICM,7]; B05D0001-30 [ICS,7]; B05D0001-00
[ICS,7,C*]; B05D0007-24 [ICS,7]; G03C0001-675 [ICS,7];
G03C0001-74 [ICS,7]; G03F0007-16 [ICS,7]
IPCR B05D0001-00 [I,C*]; B05D0001-30 [I,A]; B05D0007-24
[I,A]; B05D0007-24 [I,C*]; G03C0001-675 [I,A];
G03C0001-675 [I,C*]; G03C0001-74 [I,A]; G03C0001-74
[I,C*]; G03F0007-004 [I,A]; G03F0007-004 [I,C*];
G03F0007-16 [I,A]; G03F0007-16 [I,C*]
FTERM 2H025/AB09; 2H025/AB20; 2H025/AC01; 2H025/AD01;
2H025/AD03; 2H025/CB07; 2H025/CC14; 2H025/CC20;
2H025/DA10; 2H025/EA04; 2H123/AD00; 2H123/AD06;
2H123/AD12; 2H123/BA00; 2H123/BA13; 2H123/BA20;
2H123/BB00; 2H123/BB11; 2H123/BB17; 2H123/BB39;
2H123/BC00; 2H123/BC01; 4D075/AC14; 4D075/AC72;
4D075/AC80; 4D075/AC91; 4D075/AC92; 4D075/AC94;
4D075/AC96; 4D075/BB24Z; 4D075/BB93Z; 4D075/CA48;
4D075/DA04; 4D075/DB18; 4D075/DC27; 4D075/EA06;
4D075/EA07; 4D075/EB07; 4D075/EB12; 4D075/EB13;
4D075/EB14; 4D075/EB22; 4D075/EB33; 4D075/EB35;
4D075/EB38; 4D075/EB39; 4D075/EB56; 4D075/EC07;
4D075/EC17; 4D075/EC24; 4D075/EC35; 4D075/EC49;
4D075/EC54
AB The materials has a photoimaging layer containing (A) microcapsules
containing a
leuco dye colors by oxidation and a photo-oxidizing agent and (B) a
reducing
agent on ≥ 1 side of a support, which is formed by curtain coating a
coating solution with viscosity 30-300 mPa·s. The photoimaging layer
can be formed at less amount of coating solution, and the material gives
high
d. images without unevenness.
ST photosensitive image forming material reducing agent; leuco dye
photooxidizing agent microcapsule image formation; curtain coating
photosensitive image forming layer viscosity
IT Surfactants
(anionic; photosensitive image forming material containing reducing
agent
and microcapsule containing leuco dye and photo-oxidizing agent)
IT Coating process
(curtain; manufacture of photosensitive image forming material
containing
reducing agent and microcapsule containing leuco dye and
photo-oxidizing
agent)
IT Printing (nonimpact)
(photosensitive image forming material containing reducing agent and
microcapsule containing leuco dye and photo-oxidizing agent)
IT 1707-68-2, 2,2'-Bis-(o-chlorophenyl)-4,4', 5,5'-tetraphenylbiimidazole
RL: TEM (Technical or engineered material use); USES (Uses)
(photo-oxidizing agent; photosensitive image forming material
containing
reducing agent and microcapsule containing leuco dye and
photo-oxidizing

10593612

agent)
IT 124123-86-0, FL 71
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(photosensitive image forming material containing reducing agent and microcapsule containing leuco dye and photo-oxidizing agent)
IT 603-48-5, Tris(4-dimethylaminophenyl)methane 4865-00-3
9002-89-5D, Poly(vinyl alcohol), carboxy derivs. 9004-32-4, Carboxymethyl cellulose
RL: TEM (Technical or engineered material use); USES (Uses)
(photosensitive image forming material containing reducing agent and microcapsule containing leuco dye and photo-oxidizing agent)
IT 71281-78-2, Phenidone A
RL: TEM (Technical or engineered material use); USES (Uses)
(reducing agent; photosensitive image forming material containing reducing agent and microcapsule containing leuco dye and photo-oxidizing agent)
IT 88477-65-0
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(surfactant; photosensitive image forming material containing reducing agent and microcapsule containing leuco dye and photo-oxidizing agent)

L13 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 2000:280751 CAPLUS
DN 133:73630
ED Entered STN: 01 May 2000
TI Aryltitanium Species through the Reaction of N,N-Dialkylarylamines with TiCl₄: Oxidative Coupling, N-Dealkylation, and Reaction with Electrophiles
AU Periasamy, Mariappan; Jayakumar, K. Natarajan; Bharathi, Pandi
CS School of Chemistry, University of Hyderabad, Hyderabad, 500 046, India
SO Journal of Organic Chemistry (2000), 65(11), 3548-3550
CODEN: JOCEAH; ISSN: 0022-3263
PB American Chemical Society
DT Journal
LA English
CC 21-2 (General Organic Chemistry)
OS CASREACT 133:73630
AB Reaction of TiCl₄ with N,N-dialkylanilines gave the corresponding N,N,N',N'-tetraalkylbenzidines. In reactions with N,N-dimethylanilines, mono N-dealkylation was the predominant reaction. Also studied was the reaction of aryltitanium with electrophiles, e.g. Ph₂CO.
ST alkylaryllamine reaction titanium tetrachloride; benzidine tetraalkyl prepn; dealkylation dimethylaniline titanium tetrachloride
IT Dealkylation
Dealkylation catalysts
(oxidative coupling or mono N-dealkylation of N,N-dialkylanilines using titanium tetrachloride)
IT Coupling reaction
Coupling reaction catalysts
(oxidative; oxidative coupling or mono N-dealkylation of N,N-dialkylanilines using titanium tetrachloride)
IT 99-97-8 609-72-3 698-69-1 769-06-2, N,N,2,6-Tetramethylaniline

10593612

RL: RCT (Reactant); RACT (Reactant or reagent)
(mono N-dealkylation of N,N-dimethylanilines using titanium tetrachloride)

IT 279675-40-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(mono N-dealkylation of N,N-dimethylanilines using titanium tetrachloride)

IT 7550-45-0, Titanium tetrachloride, uses
RL: CAT (Catalyst use); USES (Uses)
(oxidative coupling or mono N-dealkylation of N,N-dialkylanilines using titanium tetrachloride)

IT 82-90-6P 366-29-0P 611-21-2P 623-08-5P 767-71-5P 932-96-7P
2997-51-5P 4865-00-3P 6860-63-5P 34614-42-1P 63370-87-6P
279675-39-7P 279675-41-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 62-53-3, Benzenamine, reactions 111-24-0, 1,5-Dibromopentane
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of N-phenylpiperidine)

IT 86-56-6, 1-Dimethylaminonaphthalene 91-66-7, N,N-Diethylaniline
121-69-7, N,N-Dimethylaniline, reactions 613-97-8,
N-Ethyl-N-methylaniline
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of TiCl₄ with N,N-dialkylanilines)

IT 4096-20-2P, 1-Phenylpiperidine
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(reaction of TiCl₄ with N,N-dialkylanilines)

IT 100-52-7, Benzaldehyde, reactions 107-31-3, Methyl formate 119-61-9,
Benzophenone, reactions 1079-66-9, Chlorodiphenylphosphine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with aryltitanium)

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Baumgarten, H; Organic Syntheses 1973, V5, P1085
- (2) Bharathi, P; Org Lett 1999, V1, P857 CAPLUS
- (3) Bharathi, P; Unpublished results
- (4) Bunnett, J; J Org Chem 1957, V22, P832 CAPLUS
- (5) Carrick, W; J Org Chem 1969, V34, P2388 CAPLUS
- (6) Crimmins, M; J Am Chem Soc 1997, V119, P7883 CAPLUS
- (7) Dobner, O; Ann 1883, V217, P223
- (8) Evans, D; J Am Chem Soc 1990, V112, P866 CAPLUS
- (9) Evans, D; J Am Chem Soc 1991, V113, P1047 CAPLUS
- (10) Frohlich, E; Ber 1911, V44, P1057 CAPLUS
- (11) Gribble, G; J Am Chem Soc 1974, V96, P7812 CAPLUS
- (12) Harrison, C; Tetrahedron Lett 1987, V28, P4135 CAPLUS
- (13) Imaizumi, H; Bull Chem Soc Jpn 1977, V50, P948 CAPLUS
- (14) Kise, N; J Org Chem 1995, V60, P1100 CAPLUS
- (15) Kise, N; Tetrahedron 1998, V54, P2697 CAPLUS
- (16) Matrká, M; Chem Prumsy 1962, V12, P178 CAPLUS
- (17) Matsumura, Y; J Org Chem 1996, V61, P2809 CAPLUS
- (18) Michler, W; Ber 1881, V14, P2161
- (19) Miras, M; J Electroanal Chem 1986, V201(2), P367 CAPLUS
- (20) Mitchell, J; Aust J Chem 1957, V10, P460 CAPLUS

10593612

- (21) Mizoguchi, T; J Am Chem Soc 1962, V84, P2058 CAPLUS
(22) Naylor, F; J Chem Soc 1950, P3519 CAPLUS
(23) Periasamy, M; J Org Chem 1999, V64, P4204 CAPLUS
(24) Periasamy, M; Tetrahedron Lett 1999, V40, P7577 CAPLUS
(25) Reynaud, R; Bull Soc Chim Fr 1967, V8, P2686
(26) Venkatraman, K; The Chemistry of Synthetic Dyes 1952, VII, P705
(27) Vettorazzi, N; Electrochim Acta 1990, V35, P1081 CAPLUS
(28) Yoshida, Y; Tetrahedron Lett 1997, V38, P8727 CAPLUS

L13 ANSWER 8 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1998:656210 CAPLUS

DN 129:337624

OREF 129:68681a,68684a

ED Entered STN: 16 Oct 1998

TI Two-component electrophotographic developer containing polyolefin-coated carrier and electrophotographic development using the same

IN Tamura, Kishiomi

PA Konica Co., Japan

SO Jpn. Kokai Tokkyo Koho, 25 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G009-09

ICS G03G009-097; G03G009-113; G03G015-08

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

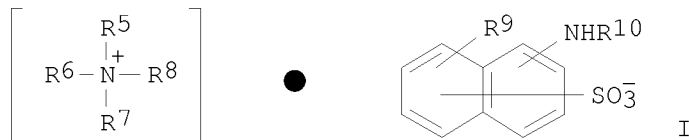
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10268568	A	19981009	JP 1997-74852	19970327
PRAI	JP 1997-74852		19970327		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 10268568	ICM	G03G009-09
	ICS	G03G009-097; G03G009-113; G03G015-08
	IPCI	G03G0009-09 [ICM,6]; G03G0009-097 [ICS,6];
G03G0009-113		[ICS,6]; G03G0015-08 [ICS,6]
	IPCR	G03G0009-09 [I,A]; G03G0009-09 [I,C*]; G03G0009-097 [I,A]; G03G0009-097 [I,C*]; G03G0009-113 [I,A]; G03G0009-113 [I,C*]; G03G0015-08 [I,A]; G03G0015-08 [I,C*]

OS MARPAT 129:337624

GI



AB The developer includes a toner, a N-containing charge-controlling agent, and a polyolefin-coated carrier of deviation from spherical form 1.0-20.0. The charge-controlling agent may be (N+R1R2R3R4)nAn-, I, (N+R5R6R7R8)2Ar(SO3-)₂, or R11R12C(p-C6H4NR13R14)(p-C6H4NR15R16) [R1 = C1-4 alkyl; R2, R5 = C1-4 alkyl, benzyl; R3, R4 = C8-22 alk(en)yl; R6 = C5-18 alkyl; R7, R8 = C1-18 alk(en)yl, benzyl; R9 = H, OH, (cyclo)alkyl; R10 = (cyclo)alkyl, Ph, acyl; R11 = H, OH, alk(en)yl; R13-16 = H, alkyl, aryl, aralkyl, alkenyl, acetyl; R12 = Ph, p-di-substituted aminophenyl, β -naphthyl]. The photog. process involves formation of a magnetic brush using the two-component electrophotog. developer. The developer shows sharp chargeability and no scattering of toner.

ST electrophotog developer polyolefin coated carrier; nitrogen contg charge controlling electrophotog developer

IT Polyolefins
 RL: TEM (Technical or engineered material use); USES (Uses)
 (carrier coating; two-component electrophotog. developer containing polyolefin-coated carrier and showing good chargeability)

IT Electrophotographic carriers
 Electrophotographic developers
 (two-component electrophotog. developer containing polyolefin-coated carrier and showing good chargeability)

IT 9002-88-4P
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (carrier coating; two-component electrophotog. developer containing polyolefin-coated carrier and showing good chargeability)

IT 1317-61-9, Iron oxide (Fe₃O₄), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (carrier; two-component electrophotog. developer containing polyolefin-coated carrier and showing good chargeability)

IT 603-48-5 4865-00-3 215180-83-9 215180-84-0 215180-86-2
 215180-88-4 215180-89-5 215180-90-8 215180-91-9
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (charge-controlling agent; two-component electrophotog. developer containing polyolefin-coated carrier and showing good chargeability)

L13 ANSWER 9 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1998:301237 CAPLUS

DN 129:29094

OREF 129:6181a

ED Entered STN: 23 May 1998

TI Effect of BSA binding on photophysical and photochemical properties of triarylmethane dyes

AU Baptista, Mauricio S.; Indig, Guilherme L.

CS School of Pharmacy, University of Wisconsin, Madison, WI, 53706, USA

SO Journal of Physical Chemistry B (1998), 102(23), 4678-4688
 CODEN: JPCBFK; ISSN: 1089-5647

PB American Chemical Society

DT Journal

LA English

CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 8, 63

- AB We have employed a combination of steady-state and time-resolved spectroscopic techniques to explore the effect of protein binding on the photophys. and photochem. properties of three triarylmethane dyes: ethyl violet, crystal violet, and malachite green. Our results indicate that the binding sites of bovine serum albumin (BSA) are very efficient in preventing fast nonradiative relaxation processes that occur via rotational motion of the aromatic rings of these triarylmethanes. As a result, remarkable enhancements in fluorescence quantum yield and lifetime, intersystem crossing efficiency, and photoreactivity are observed upon protein binding. The 532 nm laser-induced photobleaching of ethyl violet noncovalently bound to BSA yields leuco ethyl violet and 4,4'-bis(diethylamino)benzophenone as reaction products. The former was more prominent in nitrogen-purged samples and the latter in air-equilibrated samples. The time-resolved transient spectra of the ethyl violet complex show superimposed elements of the spectroscopic signatures of both ethyl violet triplet and the semireduced dye radical. Based on the nature of the reaction photoproducts and transient intermediates, the first step of the bleaching process is postulated to be an electron or hydrogen atom transfer from the protein to the dye moiety. An analogous reaction mechanism was observed for protein-bound crystal violet.
- ST triarylmethane dye fluorescence BSA binding; bovine serum albumin binding triarylmethane dye; ethyl violet fluorescence BSA effect; crystal violet fluorescence BSA effect; malachite green fluorescence BSA effect; photobleaching triarylmethane dye BSA binding; photophys property triarylmethane dye BSA effect; photochem property triarylmethane dye BSA effect
- IT Fluorescence
(effect of BSA binding on photophys. and photochem. properties of triarylmethane dyes)
- IT Photochemical bleaching
(laser-induced; of ethyl violet in presence of bovine serum albumin)
- IT Albumins, properties
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(serum; effect of BSA binding on photophys. and photochem. properties of triarylmethane dyes)
- IT Photosensitizers (pharmaceutical)
(triarylmethane dyes; effect of BSA binding on photophys. and photochem. properties of)
- IT 548-62-9, Crystal violet 2390-59-2, Ethyl violet 2437-29-8, Malachite green oxalate, reactions
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(effect of BSA binding on photophys. and photochem. properties of)
- IT 56-81-5, Glycerol, miscellaneous 126-14-7, Sucrose octaacetate
RL: MSC (Miscellaneous)
(effect on photophys. and photochem. properties of triarylmethane dyes)
- IT 90-93-7, 4,4'-Bis(diethylamino)benzophenone 4865-00-3, Leuco ethyl violet

RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
 (from laser-induced photobleaching of ethyl violet in presence of BSA)
 RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Bellin, J; Arch Biochem Biophys 1968, V123, P18 CAPLUS
- (2) Ben-Amotz, D; Chem Phys Lett 1985, V119, P305 CAPLUS
- (3) Bhasikuttan, A; J Photochem Photobiol A: Chem 1994, V84, P237 CAPLUS
- (4) Bhasikuttan, A; Photochem Photobiol 1995, V62, P245 CAPLUS
- (5) Blanchard, J; J Pharm Sci 1977, V66, P1470 CAPLUS
- (6) Chen, L; Methods Cell Biol 1989, V29, P103 MEDLINE
- (7) Cilento, G; Experientia 1988, V44, P572 CAPLUS
- (8) Cilento, G; Free Radicals Biol Med 1995, V19, P103 CAPLUS
- (9) Das, R; J Phys Chem 1996, V100, P14514 CAPLUS
- (10) Demas, J; J Phys Chem 1971, V75, P991
- (11) Denman, S; Dyes Pigm 1996, V30, P67 CAPLUS
- (12) Dougherty, T; Photochem Photobiol 1993, V58, P895 MEDLINE
- (13) Duxbury, D; Chem Rev 1993, V93, P381 CAPLUS
- (14) Fiedorowicz, M; Photochem Photobiol 1997, V65, P855 CAPLUS
- (15) Fischer, V; Photobiochem Photobiophys 1984, V7, P111 CAPLUS
- (16) Foote, C; Science 1968, V162, P963 CAPLUS
- (17) Gadelha, F; Mol Biochem Parasitol 1989, V34, P117 CAPLUS
- (18) Gilbert, A; Essentials of Molecular Photochemistry 1991
- (19) Gray, D; American Institute of Physics Handbook, 3rd ed 1972
- (20) Grinvald, A; Anal Biochem 1974, V59, P583 CAPLUS
- (21) Hamai, S; J Phys Chem 1983, V87, P83 CAPLUS
- (22) Hatchard, C; Proc R Soc London, Ser A 1956, V235, P518 CAPLUS
- (23) Henderson, B; Photochem Photobiol 1992, V55, P145 CAPLUS
- (24) Hillenkamp, F; Adv Mass Spectrom 1995, V13, P95 CAPLUS
- (25) Hirayama, N; Biochem Biophys Res Commun 1990, V173, P639
- (26) Ishikawa, M; Chem Phys Lett 1994, V219, P416 CAPLUS
- (27) Jockusch, S; J Photochem Photobiol A: Chem 1992, V63, P217 CAPLUS
- (28) Jockusch, S; J Photochem Photobiol A: Chem 1996, V96, P129 CAPLUS
- (29) Jones, G; J Photochem Photobiol A: Chem 1991, V57, P65 CAPLUS
- (30) Jones, G; J Phys Chem 1986, V90, P5414 CAPLUS
- (31) Jones, G; J Phys Chem 1994, V98, P13028 CAPLUS
- (32) Kavalauskas, M; To be published
- (33) Kemnitz, K; Chem Lett 1990, P1789 CAPLUS
- (34) Kessel, D; Drugs Today 1996, V32, P385 CAPLUS
- (35) Klotz, M; Trends Pharmacol Sci 1988, V4, P253
- (36) Knutson, J; Chem Phys Lett 1983, V102, P501 CAPLUS
- (37) Kuramoto, N; Dyes Pigm 1982, V3, P49 CAPLUS
- (38) Levy, J; Photochem Photobiol 1996, V64, P737 CAPLUS
- (39) Lewis, G; J Am Chem Soc 1942, V64, P1774 CAPLUS
- (40) Liao, Y; J Phys Chem 1996, V100, P734 CAPLUS
- (41) Martin, M; Chem Phys 1991, V153, P297 CAPLUS
- (42) Maruyama, Y; J Am Chem Soc 1996, V118, P6257 CAPLUS
- (43) Meech, S; J Photochem 1983, V23, P193 CAPLUS
- (44) Melhuish, W; J Phys Chem 1961, V65, P229 CAPLUS
- (45) Muddiman, D; J Chem Educ 1997, V74, P1288 CAPLUS
- (46) Naguib, Y; J Photochem Photobiol A: Chem 1996, V96, P149 CAPLUS
- (47) Naik, D; Anal Chem 1975, V47, P267 CAPLUS
- (48) Oster, G; J Am Chem Soc 1957, V79, P294 CAPLUS
- (49) Pal, M; Spectrochim Acta 1994, V50A, P119 CAPLUS
- (50) Pal, M; Spectrochim Acta 1994, V50A, P119 CAPLUS
- (51) Peters, T; All About Albumin Biochemistry, Genetics, and Medical

10593612

Applications 1996

- (52) Petersen, W; US 4394314 1983 CAPLUS
- (53) Scaiano, J; J Am Chem Soc 1980, V102, P7747 CAPLUS
- (54) Scatchard, G; Ann N Y Acad Sci 1949, V51, P600
- (55) Sundstrom, V; Chem Phys 1982, V73, P439
- (56) Viola, A; J Photochem Photobiol B: Biol 1996, V32, P49 CAPLUS
- (57) Viswanath, D; Data Book of the Viscosity of Liquids 1989
- (58) Vogel, M; Ber Bunsen-Ges Phys Chem 1985, V89, P962 CAPLUS
- (59) Weinberger, S; Spectroscopy 1992, V7, P54
- (60) Yariv, S; J Chem Soc, Faraday Trans 1991, V87, P1201 CAPLUS

L13 ANSWER 10 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1997:659688 CAPLUS

DN 127:316285

OREF 127:61861a,61864a

ED Entered STN: 17 Oct 1997

TI Mechanism of photobleaching of Ethyl Violet non-covalently bound to bovine

serum albumin

AU Baptista, Mauricio; Indig, Guilherme

CS Sch. Pharmacy, Univ. Wisconsin, Madison, WI, 53706, USA

SO Chemical Communications (Cambridge) (1997), (18), 1791-1792

CODEN: CHCOFS; ISSN: 1359-7345

PB Royal Society of Chemistry

DT Journal

LA English

CC 8-2 (Radiation Biochemistry)

AB Upon laser excitation of Ethyl violet non-covalently bound to bovine serum

albumin, leuco-Ethyl violet and 4,4'-bis(diethylamino)benzophenone are formed as reaction photoproducts.

ST Ethyl Violet albumin bound photobleaching

IT Photochemical bleaching

Photodynamic therapy

Photosensitizers (pharmaceutical)

(mechanism of photobleaching of Ethyl violet non-covalently bound to bovine serum albumin)

IT Albumins, biological studies

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(serum; mechanism of photobleaching of Ethyl violet non-covalently bound to bovine serum albumin)

IT 2390-59-2, Ethyl Violet

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(mechanism of photobleaching of Ethyl violet non-covalently bound to bovine serum albumin)

IT 90-93-7, 4,4'-Bis(diethylamino)benzophenone 4865-00-3, Leuco-Ethyl violet

RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)

(mechanism of photobleaching of Ethyl violet non-covalently bound to bovine serum albumin)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Bellin, J; Arch Biochem Biophys 1968, V123, P18 CAPLUS

10593612

- (2) Das, R; J Phys Chem 1996, V100, P14514 CAPLUS
- (3) Denman, S; Dyes Pigm 1996, V30, P67 CAPLUS
- (4) Dougherty, T; Photochem Photobiol 1993, V58, P895 MEDLINE
- (5) Hirayama, N; Biochem Biophys Res Commun 1990, V173, P639
- (6) Jones, G; J Photochem Photobiol A: Chem 1991, V57, P65 CAPLUS
- (7) Jori, G; J Photochem Photobiol B: Biol 1996, V36, P87 CAPLUS
- (8) Klotz, M; Trends Pharmacol Sci 1988, V4, P253
- (9) Koeplinger, K; Anal Biochem 1996, V243, P66 CAPLUS
- (10) Kuramoto, N; Dyes Pigm 1982, V3, P49 CAPLUS
- (11) Martin, M; Chem Phys 1991, V153, P297 CAPLUS
- (12) Meech, S; J Photochem 1983, V23, P193 CAPLUS
- (13) Morgan, C; Rev Sci Instrum 1996, V67, P41 CAPLUS
- (14) Paul, M; Spectrochim Acta 1994, V50, P119
- (15) Schuitmaker, J; J Photochem Photobiol B: Biol 1996, V34, P3 CAPLUS
- (16) Sundstrom, V; Chem Phys 1982, V73, P439
- (17) Vogel, M; Ber Bursenges Phys Chem 1985, V89, P962 CAPLUS
- (18) Wirth, P; Ber Bursenges Phys Chem 1977, V81, P1127 CAPLUS
- (19) Yariv, S; J Chem Soc, Faraday Trans 1991, V87, P1201 CAPLUS

L13 ANSWER 11 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1993:136193 CAPLUS

DN 118:136193

OREF 118:23301a,23304a

ED Entered STN: 30 Mar 1993

TI Electrophotographic photoreceptor having protective layer containing metal

or metal oxides and hole-transporting agents

IN Noshio, Shinji; Seto, Mitsuru; Rokutanzono, Setsu

PA Ricoh Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G005-147

ICS G03G005-147

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 04281461	A	19921007	JP 1991-69066	19910308
	JP 3286711	B2	20020527		
PRAI	JP 1991-69066		19910308		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
-----	-----	-----
JP 04281461	ICM	G03G005-147
	ICS	G03G005-147
	IPCI	G03G0005-147 [ICM,5]; G03G0005-147 [ICS,5]
	IPCR	G03G0005-147 [I,C*]; G03G0005-147 [I,A]

AB An electrophotog. photoreceptor comprises a photoconductive layer and a surface protective layer containing fine particles of metals of metal oxides

dispersed in a binder resin, formed in that order on a conductive support,

10593612

wherein the surface protective layer contain hole-transporting agents.
The electrophotog. photoreceptor show high mech. strength and stable
elec.
characteristics in a repeated use. Phenylhydrazones, trisubstituted
amines, carbazole compds., fluorenylidene compds., diphenylmethane
compds., divinylbenzene compds., diphenylethenyl compds., vinylanthracene
compds., diphenylpyrazoline compds., etc. may be used as
hole-transporting
agents.
ST electrophotog photoreceptor protective layer metal
IT Metals, uses
RL: USES (Uses)
(electrophotog. photoreceptor surface protective layer containing
hole-transporting agent and)
IT Electrophotographic photoconductors and photoreceptors
(surface protective layer containing metal or oxides and
hole-transporting
agents for)
IT 18282-10-5, Stannic oxide
RL: USES (Uses)
(electrophotog. photoreceptor surface protective layer containing
hole-transporting agent and)
IT 2564-18-3 2871-86-5 4432-94-4 4865-00-3 41578-11-4
57609-72-0 59670-26-7 65272-89-1 71530-62-6 71530-63-7
75232-44-9 75238-79-8 80073-39-8 84271-49-8 86230-09-3
86230-10-6 89114-74-9 89114-90-9 90255-76-8 101677-59-2
106614-59-9 131625-67-7 131625-68-8 145804-41-7 146488-68-8
RL: USES (Uses)
(electrophotog. photoreceptor surface protective layer containing
stannic
oxide and, as hole-transporting agent)

L13 ANSWER 12 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1989:584108 CAPLUS
DN 111:184108
OREF 111:30461a,30464a
ED Entered STN: 10 Nov 1989
TI Material having variable conductivity for information recording medium
IN Inoue, Eiichi; Noshiro, Atsumi; Utsumi, Minoru
PA Dai Nippon Printing Co., Ltd., Japan
SO PCT Int. Appl., 69 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM G03G005-026
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 73, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	WO 8807224	A1	19880922	WO 1988-JP277	19880317
	W: US				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	JP 63271266	A	19881109	JP 1987-61350	19870318

10593612

	EP 307479	A1	19890322	EP 1988-902559	19880317
	EP 307479	B1	20030611		
	R: DE, GB, NL				
	US 4997593	A	19910305	US 1989-274938	19890104
	US 5192631	A	19930309	US 1990-594026	19901009
	US 5373348	A	19941213	US 1992-972519	19921106
PRAI	JP 1987-61350	A	19870318		
	JP 1986-274362	A1	19861118		
	WO 1988-JP277	W	19880317		
	US 1989-274938	A3	19890104		
	US 1990-594026	A3	19901009		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 8807224	ICM	G03G005-026
	IPCI	G03G0005-026 [ICM,4]
	IPCR	G03G0005-026 [I,C*]; G03G0005-026 [I,A]
	ECLA	G03G005/026
JP 63271266	IPCI	G03G0005-026 [ICM,4]; G03G0005-028 [ICS,4]
	IPCR	G03G0005-026 [I,C*]; G03G0005-026 [I,A]; G03G0005-028 [I,C*]; G03G0005-028 [I,A]
	ECLA	G03G005/026
EP 307479	IPCI	G03G0005-026 [ICM,4]
	IPCR	G03G0005-026 [I,C*]; G03G0005-026 [I,A]
	ECLA	G03G005/026
US 4997593	IPCI	H01B0001-00 [ICM,5]; H01C0013-00 [ICS,5]
	IPCR	G03G0005-026 [I,C*]; G03G0005-026 [I,A]
	NCL	252/500.000; 252/501.100; 338/014.000; 338/015.000; 430/058.050; 430/058.100
	ECLA	G03G005/026
US 5192631	IPCI	G03G0005-06 [ICM,5]
	IPCR	G03G0005-026 [I,C*]; G03G0005-026 [I,A]
	NCL	430/056.000; 313/523.000; 338/014.000; 338/015.000; 347/153.000; 365/108.000; 365/112.000; 428/913.000; 430/945.000
	ECLA	G03G005/026
US 5373348	IPCI	G03G0015-00 [ICM,5]; G03G0005-06 [ICS,5]; H01B0001-00 [ICS,5]; H01C0013-00 [ICS,5]
	IPCR	G03G0005-026 [I,C*]; G03G0005-026 [I,A]
	NCL	365/112.000; 252/500.000; 430/056.000
	ECLA	G03G005/026

AB The title material is prepared by compounding a conductivity change-inducing agent composed of a substance undergoing reversible or irreversible structural changes between nonionic and ionic structures by light or heat energy with a charge-transporting substance undergoing changes in conductivity in accordance with the structural change of the conductivity-change-inducing agent. An information recording medium prepared from this material has excellent memory stability. This material also provides a light (or heat) transducing element having excellent transducing properties.

ST cond variable compn; electrophotog medium photocond; transducer photoelec medium; thermoelec converter medium

IT Electric conductivity and conduction

10593612

(agents for inducing changes in)
IT Photoelectric devices
Thermoelectric cells
(compsn. containing conductivity-change-inducing agents for)
IT Electrophotographic photoconductors
(containing conductivity change-inducing agents)
IT Electric conductors
(variable conductivity)
IT Optical instruments
(switches, variable conductivity materials for)
IT 147-14-8 198-55-0, Perylene 1518-16-7 9003-53-6D, complex with
silver chlorate 29191-01-3 31366-25-3 66259-09-4D, complex with
polystyrene 101483-18-5 123374-59-4 123374-60-7 123374-61-8
123377-32-2 123385-21-7 123385-22-8
RL: USES (Uses)
(charge-transporting agent, for electrophotog. photoconductor)
IT 131-09-9 603-48-5 4865-00-3 6427-75-4 7328-65-6
16650-14-9 17017-78-6 20463-45-0 21791-55-9 23022-08-4
33594-77-3 123396-38-3 123396-39-4 123396-40-7 123396-41-8
123396-42-9 123396-43-0 123396-44-1 123396-45-2
RL: USES (Uses)
(conductivity-change-inducing compound, electrophotog. conductors and
transducers using)
IT 123374-58-3
RL: USES (Uses)
(electrophotog. photoconductor using)

L13 ANSWER 13 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1986:470142 CAPLUS

DN 105:70142

OREF 105:11261a,11264a

ED Entered STN: 23 Aug 1986

TI Electrophotographic material with charge-generating layer containing
diaz

dye and charge-transfer layer containing polyaryllalkane

IN Yamaguchi, Akio; Ban, Motoo; Murakami, Naomichi

PA Takasago Perfumery Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G005-04

ICS H01L031-08

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61051151	A	19860313	JP 1984-173712	19840821
PRAI	JP 1984-173712		19840821		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 61051151	ICM	G03G005-04
	ICS	H01L031-08

10593612

IPCI G03G0005-04 [ICM,4]; H01L0031-08 [ICS,4]
IPCR G03G0005-04 [I,C*]; G03G0005-04 [I,A]; G03G0005-06
[I,C*]; G03G0005-06 [I,A]; H01L0051-42 [I,C*];
H01L0051-42 [I,A]

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB An electrophotog. material contains a charge-generating layer containing
I (R

= Cl, Me, OMe; n = 1-3) and a charge-transfer layer containing II [R1 =
lower

alkyl, PhCH₂; R2 = H, Me, OMe; R3 = Ph, cyclohexyl, naphthyl]. Thus, a
charge-transfer layer containing II (R1 = Et; R2 = Me; R3 = Ph) and
Iupilon S

2000 was coated on a charge-generating layer containing I [R = Cl; n = 2
(p-NO₂, o-NO₂)] and Vylon 200 (saturated polyester) which was coated on
an

AL-laminated PET support to obtain an electrophotog. material, which
showed excellent sensitivity and durability.

ST electrophotog photoconductor sensitivity durability; charge generating
layer photosensitive material; disazo pigment charge generating layer;
polyaryllalkane compd charge transfer layer

IT Photography, electro-, photoconductors
(with charge-generating layer containing diazo dye and charge-transfer
layer containing polyaryllalkane)

IT Alkanes, uses and miscellaneous

RL: USES (Uses)
(aryl, electrophotog. photoconductor with charge-transfer layer
containing,
for improved durability)

IT 94492-49-6 94507-07-0 103426-54-6 103426-56-8 103426-57-9
103426-58-0 103426-59-1
RL: USES (Uses)

(electrophotog. photoconductor with charge-generating layer
containing, for
improved durability)

IT 4463-85-8 4482-70-6 4865-00-3 15008-36-3 16093-09-7
33906-09-1 36217-56-8 68582-40-1 68582-45-6 69183-96-6
70895-80-6 101043-41-8 103426-55-7
RL: USES (Uses)

(electrophotog. photoconductor with charge-transfer layer containing,
for
improved durability)

L13 ANSWER 14 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1986:196932 CAPLUS

DN 104:196932

OREF 104:30993a,30996a

ED Entered STN: 01 Jun 1986

TI Electrophotographic original printing form and printing plates

IN Tsutsui, Kyoji; Hashimoto, Mitsuru; Ohta, Masafumi; Sasaki, Masaomi

10593612

PA Ricoh Co., Ltd., Japan
 SO Ger. Offen., 200 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC ICM G03G005-14
 ICS G03G005-06; G03G005-05; G03G013-28
 CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 9

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	DE 3515177	A1	19851107	DE 1985-3515177	19850426
	JP 60230147	A	19851115	JP 1984-85891	19840427
	JP 60230148	A	19851115	JP 1984-85892	19840427
	JP 60230149	A	19851115	JP 1984-85893	19840427
	JP 60230150	A	19851115	JP 1984-85894	19840427
	JP 60230151	A	19851115	JP 1984-85895	19840427
	JP 60230152	A	19851115	JP 1984-85896	19840427
	JP 60235140	A	19851121	JP 1984-91243	19840508
	JP 60235141	A	19851121	JP 1984-91244	19840508
	JP 60235142	A	19851121	JP 1984-91245	19840508
	JP 60235143	A	19851121	JP 1984-91246	19840508
	JP 60235144	A	19851121	JP 1984-91247	19840508
	JP 60238851	A	19851127	JP 1984-95851	19840514
PRAI	JP 1984-85891	A	19840427		
	JP 1984-85892	A	19840427		
	JP 1984-85893	A	19840427		
	JP 1984-85894	A	19840427		
	JP 1984-85895	A	19840427		
	JP 1984-85896	A	19840427		
	JP 1984-91243	A	19840508		
	JP 1984-91244	A	19840508		
	JP 1984-91245	A	19840508		
	JP 1984-91246	A	19840508		
	JP 1984-91247	A	19840508		
	JP 1984-95851	A	19840514		

CLASS

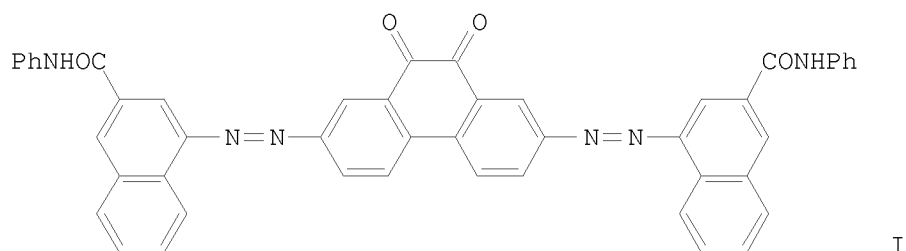
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
-----	----	-----
DE 3515177	ICM	G03G005-14
	ICS	G03G005-06; G03G005-05; G03G013-28
	IPCI	G03G0005-14 [ICM, 4]; G03G0005-06 [ICS, 4]; G03G0005-05 [ICS, 4]; G03G0013-28 [ICS, 4]
	IPCR	C09B0035-00 [I, C*]; C09B0035-021 [I, A]; G03G0005-06 [I, C*]; G03G0005-06 [I, A]
JP 60230147	IPCI	G03G0013-28 [ICM, 4]; B41N0001-14 [ICS, 4]; B41N0001-12 [ICS, 4, C*]; G03G0005-14 [ICS, 4]
	IPCR	B41N0001-12 [I, C*]; B41N0001-14 [I, A]; G03G0005-06 [I, C*]; G03G0005-06 [I, A]; G03G0005-14 [I, C*]; G03G0005-14 [I, A]; G03G0013-28 [I, C*]; G03G0013-28 [I, A]
JP 60230148	IPCI	G03G0013-28 [ICM, 4]; B41N0001-14 [ICS, 4]; B41N0001-12 [ICS, 4, C*]; G03G0005-14 [ICS, 4]
	IPCR	B41N0001-12 [I, C*]; B41N0001-14 [I, A]; G03G0005-06

[illegible]

10593612

[I,C*]; G03G0005-06 [I,A]; G03G0005-14 [I,C*];
G03G0005-14 [I,A]; G03G0013-28 [I,C*]; G03G0013-28
[I,A]

GI



AB Electrophotog. photoreceptors for use in preparing printing plates are composed of an elec. conductive support coated with a charge carrier-generating layer containing an azo pigment as the charge carrier-generating agent and a charge carrier-transporting layer containing a charge carrier-transporting agent and an alkali-soluble resin. For the preparation of electrophotog. printing plates, these photoreceptors are over-all elec. charged, imagewise exposed to produce a latent electrostatic image thereon, developed with a toner and fixed, and then the nonimage areas removed by dissolving with a liquid developer. Thus, a grained Al plate was coated with a ball-milled dispersion containing I 1 and a 0.74% THF solution of MP-707 (m-cresol-phenol-HCHO copolymer) 66.7 parts, dried to give a .apprx.1 μ m thick charge carrier-generating layer, and then coated with a solution containing 2,5-bis(4-diethylaminophenyl)-1,3,4-oxadiazole 0.9, maleic anhydride-styrene copolymer (1:1) 1.8, and THF 13.2 parts and dried to give a 10 μ m thick charge carrier-transporting layer. The resultant photoreceptor showed a charge acceptance of -830 V and an E1/2 value of 2.5 lx-s. The photoreceptor was then used in a com. electrophotog. platemaking apparatus to produce a printing plate capable of giving .apprx.50,000 prints with clear images in a offset printing machine.

ST azo pigment charge generation electrophotog; offset lithog plate electrophotog photoreceptor

IT Photography, electro-, plates
(composite, with azo pigment-containing charge carrier-generating layer, for offset lithog. plate fabrication)

IT Phenolic resins, uses and miscellaneous
RL: USES (Uses)
(electrophotog. composite photoreceptor with layers containing, for offset

10593612

lithog. plate fabrication)
IT Dyes, azo
Azo compounds
RL: USES (Uses)
(electrophotog. composite photoreceptors with charge
carrier-generating
layers containing, for offset lithog. plate fabrication)
IT Lithographic plates
(offset, composite electrophotog. photoreceptors with azo
pigment-containing charge carrier-generating layer for fabrication of)
IT 118-75-2, uses and miscellaneous 129-79-3 488-48-2 670-54-2, uses
and miscellaneous 746-53-2 1679-98-7 2871-86-5 4865-00-3
15008-36-3 22159-33-7 53167-79-6 53332-49-3 54849-77-3
63406-83-7 64535-48-4 65272-89-1 65419-29-6 68189-23-1
71530-62-6 71530-63-7 75232-44-9 75238-79-8 77867-04-0
80073-39-8 80165-58-8 80165-59-9 82532-74-9 84271-49-8
86230-09-3 86230-14-0 89114-69-2 89114-74-9 89114-90-9
90255-76-8 91175-18-7 92003-02-6 101646-64-4 101677-57-0
101677-58-1 101677-59-2 101701-12-6 101701-13-7
RL: USES (Uses)
(electrophotog. composite photoreceptor with azo pigment-containing
charge
carrier-generating layer and charge carrier-transport layer
containing, for
offset lithog. plate fabrication)
IT 5437-88-7 5722-37-2 10127-03-4 41709-76-6 41709-80-2 42530-65-4
62820-87-5 62939-16-6 63737-50-8 68886-83-9 68886-84-0
68886-90-8 69474-95-9 69474-96-0 69534-94-7 69534-95-8
70010-08-1 70010-09-2 70010-22-9 70061-21-1 70206-95-0
70206-99-4 70207-53-3 70207-55-5 70370-47-7 70370-48-8
70370-50-2 70370-66-0 70370-75-1 70370-86-4 70477-65-5
70477-68-8 70477-69-9 70477-91-7 70477-92-8 70477-93-9
70477-97-3 70477-98-4 70478-11-4 70482-05-2 70482-06-3
70482-07-4 70482-18-7 70482-19-8 70482-20-1 70482-30-3
70482-33-6 70492-16-9 70581-69-0 70620-57-4 70621-09-9
70621-10-2 70621-11-3 70621-13-5 70621-15-7 70621-28-2
72386-56-2 72386-59-5 72386-60-8 72386-66-4 72386-98-2
72387-00-9 72387-06-5 74992-88-4 75772-71-3 75772-76-8
76340-08-4 76412-90-3 76966-60-4 77155-80-7 77394-53-7
77901-06-5 79903-18-7 79903-31-4 79906-73-3 79906-74-4
80421-48-3 80421-50-7 80715-64-6 80716-78-5 80716-80-9
80716-96-7 80734-05-0 80734-12-9 81287-27-6 81287-28-7
81368-08-3 81670-79-3 81670-80-6 81670-82-8 81947-64-0
82382-59-0 82382-87-4 82382-89-6 82382-91-0 82382-92-1
82393-06-4 82829-36-5 83304-21-6 83304-22-7 83304-24-9
84809-01-8 85775-79-7 85775-81-1 85775-89-9 85775-90-2
85775-92-4 85785-88-2 86192-21-4 86192-24-7 86192-27-0
86192-28-1 87339-15-9 87340-17-8 87524-64-9 89547-62-6
89547-65-9 89547-70-6 89547-79-5 89547-87-5 89547-93-3
89548-06-1 89548-09-4 89548-10-7 89548-12-9 89548-22-1
89548-33-4 89548-42-5 89548-43-6 89548-45-8 89548-80-1
89548-81-2 89560-65-6 91915-37-6 91915-42-3 91915-57-0
91930-27-7 93521-89-2 93754-34-8 93754-35-9 93754-36-0
93754-37-1 93754-39-3 93754-41-7 93754-44-0 94239-57-3
94239-60-8 94239-75-5 94239-76-6 94269-89-3 94507-07-0

10593612

	94517-42-7	94717-28-9	94717-43-8	95153-42-7	95398-56-4
	95738-21-9	96022-04-7	96358-38-2	96358-39-3	96358-41-7
	96564-02-2	96564-04-4	96564-05-5	96564-06-6	96564-07-7
	96564-09-9	96564-10-2	96564-11-3	96564-12-4	96890-45-8
	97208-48-5	97208-49-6	97208-50-9	97730-34-2	97730-35-3
	97730-36-4	97730-40-0	97780-50-2	97780-51-3	97780-53-5
	97780-56-8	97780-57-9	97780-59-1	97780-61-5	97780-67-1
	97780-69-3	97804-93-8	97804-96-1	97804-97-2	97931-88-9
	98982-87-7	99087-78-2	99087-81-7	99087-96-4	99110-21-1
	99110-22-2	99501-29-8	99501-30-1	99501-32-3	101677-51-4
	101677-52-5	101677-53-6	101677-54-7	101677-55-8	101677-56-9
	101692-18-6	101692-19-7	101692-20-0	101692-21-1	101692-22-2
	101692-23-3	101692-24-4	101692-25-5	101692-26-6	101692-27-7
	101692-29-9	101700-93-0	101700-94-1	101700-95-2	101700-96-3
	101700-97-4	101700-98-5	101700-99-6	101701-00-2	101701-01-3
	101701-02-4	101701-03-5	101701-04-6	101701-05-7	101701-06-8
	101701-07-9	101701-08-0	101701-09-1	101701-10-4	101701-11-5
	101710-33-2	101710-34-3	101710-35-4		
	RL: USES (Uses)				
	(electrophotog. composite photoreceptor with charge carrier-generating layer containing, for offset lithog. plate fabrication)				
IT	101710-36-5	101710-37-6	101710-38-7	101710-39-8	101710-40-1
	101710-41-2	101710-42-3	101710-43-4	101710-45-6	101710-46-7
	101710-47-8	101710-48-9	101710-49-0	101756-04-1	101756-05-2
	101756-06-3	101756-07-4	101756-08-5	101756-09-6	101756-10-9
	101756-11-0	101756-12-1	101756-13-2	101756-14-3	101756-15-4
	101771-69-1	101771-70-4	101771-71-5	101809-35-2	101809-36-3
	101809-37-4	101809-39-6	101809-41-0	101809-42-1	101809-44-3
	101948-84-9	102060-06-0	102300-87-8		
	RL: USES (Uses)				
	(electrophotog. composite photoreceptor with charge carrier-generating layer containing, for offset lithog. plate fabrication)				
IT	79-41-4D, polymers with methacrylates and styrene		100-42-5D, polymers with methacrylic acid and methacrylates		
			9011-13-6	25086-36-6	
	RL: USES (Uses)				
	(electrophotog. composite photoreceptor with layers containing, for offset lithog. plate fabrication)				
IT	84-66-2	84-74-2	117-82-8	131-11-3	2054-98-0
	RL: MOA (Modifier or additive use); USES (Uses)				
	(plasticizer, electrophotog. composite photoreceptor with charge carrier-transporting layer containing, for offset lithog. plate fabrication)				
RE.CNT	8	THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD			
RE					
(1)	Anon;	DE 2629844	A1	CAPLUS	
(2)	Anon;	DE 2831557	C2	CAPLUS	
(3)	Anon;	DE 3114650	A1	CAPLUS	
(4)	Anon;	DE 3117076	C2	CAPLUS	
(5)	Anon;	DE 3219765	A1	CAPLUS	
(6)	Anon;	DE 3300244	A1	CAPLUS	
(7)	Anon;	DE 3321871	A1	CAPLUS	
(8)	Anon;	DE 3336595	A1	CAPLUS	

L13 ANSWER 15 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

10593612

AN 1986:119917 CAPLUS
DN 104:119917
OREF 104:18816h,18817a
ED Entered STN: 05 Apr 1986
TI Electrophotographic photoreceptor
IN Kawamura, Fumio; Kawamura, Masamichi; Watanabe, Akira; Amada, Hiroshi;
Koizumi, Ayamichi
PA Tomoegawa Paper Mfg. Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-05
ICS G03G005-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

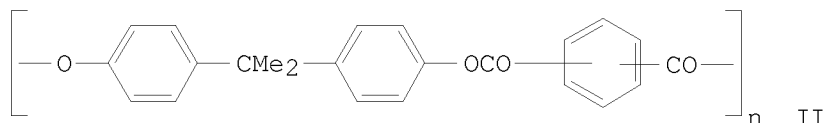
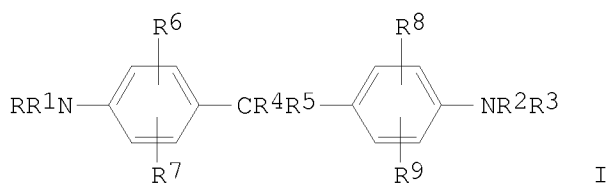
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60168151	A	19850831	JP 1984-22972	19840213
	JP 02017104	B	19900419		
PRAI	JP 1984-22972		19840213		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60168151	ICM	G03G005-05
	ICS	G03G005-08
	IPCI	G03G0005-05 [ICM,4]; G03G0005-08 [ICS,4]
	IPCR	G03G0005-05 [I,C*]; G03G0005-05 [I,A]; G03G0005-08 [I,C*]; G03G0005-08 [I,A]

GI



AB The supported photoconductive layer of the title photoreceptor contains a ZnO powder having a surface area of <2 m²/g, a compound having the general

formula I (R-R₃ = H, (substituted) alkyl, cycloalkyl, alkenyl, aryl, aralkyl; R₄, R₅ = H, (substituted) alkyl, cycloalkyl, alkenyl, cycloalkenyl, aryl; R₆-R₉ = H, OH, (substituted) alkyl, cycloalkyl, alkenyl, aryl, alkoxy, NH₂; and R₄ and R₅ together may jointly form a

C1-3

10593612

saturated or unsatd. hydrocarbon ring), and a polycarbonate and/or a thermoplastic polyarylate of the composition II ($n = 20-200$). The ZnO powder

may be doped with Li, K, Na, or Cu. The photoreceptor has good photosensitivity and high reproducibility and is suitable for use in rapid

copying processes using a neg. charge. Thus, a ZnO powder (sp. surface area 3.4 m²/g; Sazex 4000) was treated at 800° in a dry air stream for 5 h to reduce the sp. surface area to 1.8 m²/g. The treated ZnO 100 parts was dispersed in a THF solution containing tetrachloroisofluorescein 0.2

part and, after 3 h, the THF evaporated. The treated ZnO 10 parts was added to

a solution containing a polycarbonate (Panlite L-1225) 10 and 1,1-bis(4-N,N-diethylamino-2-methylphenyl)-1-phenylmethane 10 parts in 1,2-dichloroethane and dispersed. The dispersion was coated on an Al-laminated poly(ethylene terephthalate) film primed with a poly(vinyl butyral) (Eslec W201) to form a 28-μ photoconductive layer. The obtained photoreceptor was charged to -510 V. The lx-s value required for

half decay of the voltage was 3.0. The residual potential after discharge

by light irradiation was 0 V. After 1000 charge-discharge cycles, these values were -515 V, 3.1 lx-s, and 0 V, resp.

ST electrophotog photoconductor zinc oxide aminophenylmethane; polyarylate zinc oxide electrophotog photoconductor

IT Photography, electro-, photoconductors (containing zinc oxide powder with reduced sp. surface area and bis(alkylaminophenyl)methane derivative and polycarbonate and thermoplastic

polyarylate)
IT 7790-69-4 100752-98-5
RL: USES (Uses)

(electrophotog. photoconductor containing bis(alkylaminophenyl)methane derivative and polycarbonate and thermoplastic polyarylate and zinc oxide

treated with)
IT 24936-68-3, uses and miscellaneous 26659-32-5
RL: USES (Uses)

(electrophotog. photoconductor containing zinc oxide powder with reduced

sp. surface area and bis(alkylaminophenyl)methane derivative and)
IT 4463-85-8 4865-00-3 6310-53-8 68582-40-1 100818-13-1
100818-14-2 100818-15-3
RL: USES (Uses)

(electrophotog. photoconductor containing zinc oxide powder with reduced

sp. surface area and polycarbonate or thermoplastic polyarylate and)
IT 15008-36-3
RL: USES (Uses)

(electrophotog. photoconductor containing zinc oxide with reduced sp. surface area and polycarbonate or thermoplastic polyarylate and)

L13 ANSWER 16 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1985:532346 CAPLUS

10593612

DN 103:132346
OREF 103:21031a,21034a
ED Entered STN: 19 Oct 1985
TI Multilayer electrophotographic photoreceptor
PA Hitachi, Ltd., Japan; Toyo Ink Mfg. Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03G005-04
ICS H01L031-08
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

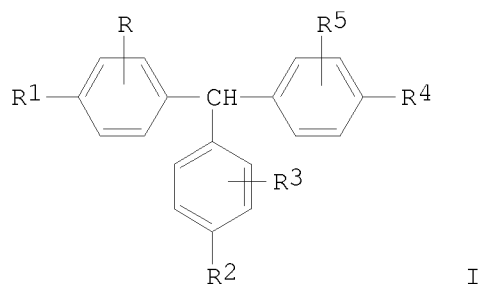
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60087334	A	19850517	JP 1983-196594	19831019
PRAI	JP 1983-196594		19831019		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 60087334	ICM	G03G005-04
	ICS	H01L031-08
	IPCI	G03G0005-04 [ICM,4]; H01L0031-08 [ICS,4]
	IPCR	G03G0005-04 [I,C*]; G03G0005-04 [I,A]; G03G0005-06 [I,C*]; G03G0005-06 [I,A]; H01L0031-08 [I,C*]; H01L0031-08 [I,A]

GI



AB Photoreceptor consists of a conductive support, charge-generating layer containing τ -, τ' -, η -, or η' -type nonmetal phthalocyanine, and a charge transport layer containing I (R-R5 = H, alkyl, NH2, dialkylamino, alkoxy, halo). Photoreceptor has high sensitivity in the 500-825 nm region. Thus, charge-generator composition prepared by kneading τ -type nonmetal phthalocyanine 1, modified silicone resin (KR-323) 0.005, and THF 37 parts was coated on an Al foil to form a 0.5 μ m layer. Then the charge transport layer was formed by coating a composition containing

10593612

tris(p-dimethylaminophenyl)methane 1, polycarbonate resin (Lexan 141-111) 0.5, and KP-323 0.001-0.007 part on the charge generating layer to a 15 μm thickness. Photoreceptor upon charging to -840 V showed a dark decay after 30 s of 32% and Lxs for half decay of charge voltage by irradiation of 1.2. High sensitivity in the indicated range was confirmed.

ST photoreceptor electrophotog laser; phthalocyanine nonmetal charge generator photoreceptor; triphenylmethane deriv charge transport photoreceptor

IT Photography, electro-, photoconductors
(composites, with charge generating layer containing nonmetal phthalocyanine and charge transport layer containing triphenylmethane derivative, laser-sensitive)

IT Photography, electro-, plates
(laser, containing nonmetal phthalocyanine and triphenylmethane derivative)

IT Siloxanes and Silicones, uses and miscellaneous
RL: USES (Uses)
(laser-sensitive electrophotog. photoreceptor containing)

IT Vinyl acetal polymers
RL: USES (Uses)
(butyrals, laser-sensitive electrophotog. photoreceptor containing)

IT 574-93-6
RL: USES (Uses)
(laser-sensitive electrophotog. photoconductor containing τ -)

IT 603-48-5 4865-00-3 37337-82-9 76688-46-5 98192-17-7
RL: USES (Uses)
(laser-sensitive electrophotog. photoreceptor containing)

L13 ANSWER 17 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1984:15375 CAPLUS

DN 100:15375

OREF 100:2351a,2354a

ED Entered STN: 12 May 1984

TI Diazonium imaging system

IN Gatzke, Kenneth G.

PA Minnesota Mining and Manufacturing Co., USA

SO U.S., 9 pp. Cont.-in-part of U.S. Ser. No. 101,143, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC G03C001-60; G03C005-18; G03C001-727

INCL 430151000

CC 74-10 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4394433	A	19830719	US 1981-286197	19810723
	EP 41984	A1	19811223	EP 1981-900099	19801027
	EP 41984	B1	19840919		

R: AT, CH, DE, FR, GB, LU, NL, SE

PRAI US 1979-101143 A2 19791207

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

```

-----
US 4394433      IC      G03C001-60; G03C005-18; G03C001-727
                  INCL    430151000
                  IPCI    G03C0001-60 [ICM]; G03C0001-52 [ICM,C*]; G03C0005-18
                        [ICS]; G03C0001-727 [ICS]
                  IPCR    G03C0001-52 [I,C*]; G03C0001-61 [I,A]; G03C0001-73
                        [I,C*]; G03C0001-73 [I,A]
                  NCL    430/151.000; 430/154.000; 430/157.000; 430/176.000;
                        430/177.000; 430/179.000; 430/334.000; 430/336.000;
                        430/338.000; 430/340.000; 430/341.000; 430/343.000
                  ECLA    G03C001/61; G03C001/73L
EP 41984        IPCI    G03C0001-60 [ICM]; G03C0001-54 [ICS]; G03C0001-52
                        [ICS,C*]; G03C0001-72 [ICS]
                  ECLA    G03C001/61; G03C001/73L
AB  A heat-developable imaging composition contains a polymeric binder, a
leuco dye
    and a diazonium dye. Thus, a poly(ethylene terephthalate) support was
    coated with a composition containing phthalic acid 0.1, a mixture of
    1-diazo-2,5-diethoxy-4-morpholinobenzene borofluoride and
    diphenylamine-4-diazonium borofluoride (1:1) 0.075, Me2CO 0.875,
    leucocrystal violet 0.075, 1,1,2-trimethyl-5-carboxyl-3-(p-
    carboxyphenyl)indan 0.1, and THF 0.825 g, and a solution of 40% vinyl
    acetate-vinyl chloride copolymer in Me iso-Bu ketone/MeCOEt (10/50%)
    mixture, dried, imagewise UV exposed, and developed 60 s at 132° to
    give an image with Dmin 0.3 and Dmax 1.3.
ST  photosensitive heat development compn diazo; leuco dye diazonium salt
    imaging; photoimaging leuco dye diazonium salt; photothermog leuco dye
    diazonium salt
IT  Diazo process
    (photosensitive heat-developing composition containing diazonium salt
    and leuco
    dye and polymeric binder)
IT  Photoduplication
    (photosensitive heat-developing imaging system for)
IT  9003-22-9  9004-35-7  9004-36-8  9005-09-8  25086-48-0
    RL: USES (Uses)
    (binder, for photosensitive heat-developing imaging system containing
    diazonium salt and leuco dye)
IT  50-81-7, uses and miscellaneous 62-56-6, uses and miscellaneous
    64-19-7, uses and miscellaneous 65-85-0, uses and miscellaneous
    77-92-9, uses and miscellaneous 85-41-6 86-93-1 88-99-3, uses and
    miscellaneous 90-68-6 93-09-4 94-28-0 94-36-0, uses and
    miscellaneous 95-14-7 97-05-2 104-15-4, uses and miscellaneous
    110-94-1 117-08-8 119-39-1 119-47-1 120-80-9, uses and
    miscellaneous 144-62-7, uses and miscellaneous 149-30-4 253-52-1
    461-72-3 503-87-7 603-11-2 1072-62-4 3569-18-4 4316-23-8
    7292-14-0 7487-88-9, uses and miscellaneous 7647-01-0, uses and
    miscellaneous 7697-37-2, uses and miscellaneous 7786-30-3, uses and
    miscellaneous 7789-48-2 10034-81-8 10377-60-3 25054-06-2
    50934-92-4 51767-45-4 71281-78-2 78642-56-5D, Me ethers
87209-39-0
    87209-88-9 87210-22-8
    RL: USES (Uses)
    (photosensitive heat-developing imaging system containing diazonium
    salt

```

10593612

and leuco dye and polymeric binder and)
IT 129-73-7 548-61-8 1249-97-4 4865-00-3 54060-86-5
75535-15-8 79331-10-5 87175-64-2
RL: USES (Uses)
(photosensitive heat-developing imaging system containing diazonium
salt
and polymeric binder and)
IT 456-27-9 2367-19-3 4979-72-0 5149-85-9 5233-95-4 6014-68-2
6023-29-6 6023-44-5 9070-36-4 14726-58-0 24564-52-1 27569-10-4
33678-73-8 36422-95-4 36576-70-2 39288-51-2 50543-78-7
52018-21-0 52593-56-3 53364-70-8 68052-11-9 68979-00-0
79245-76-4 87150-93-4 87160-58-5
RL: USES (Uses)
(photosensitive heat-developing imaging system containing leuco dye
and
polymeric binder and)

L13 ANSWER 18 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1983:541537 CAPLUS
DN 99:141537
OREF 99:21745a,21748a
ED Entered STN: 12 May 1984
TI Aromatic aldehyde preparation by reaction of selected aromatic compounds
with formamidine acetate and an organic acid anhydride
IN Petersen, Wallace C.
PA du Pont de Nemours, E. I., and Co., USA
SO U.S., 9 pp.
CODEN: USXXAM
DT Patent
LA English
IC C09B011-14; C07C103-24
INCL 260391000
CC 41-9 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic
Sensitizers)
Section cross-reference(s): 25, 27

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4394314	A	19830719	US 1981-256734	19810423
PRAI	US 1981-256734		19810423		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4394314	IC	C09B011-14; C07C103-24
	INCL	260391000
	IPCI	C09B0011-14 [ICM]; C09B0011-00 [ICM,C*]; C07C0103-24 [ICS]
	IPCR	C07D0207-00 [I,C*]; C07D0207-32 [N,A]; C07D0207-335 [I,A]; C07D0209-00 [I,C*]; C07D0209-14 [I,A]; C07D0231-00 [I,C*]; C07D0231-26 [I,A]; C09B0011-00 [I,C*]; C09B0011-02 [I,A]; C09B0011-10 [I,A]
	NCL	564/144.000; 544/159.000; 548/269.400; 548/365.400; 548/370.100; 548/371.100; 548/455.000; 548/496.000; 548/561.000; 549/059.000; 549/076.000; 558/376.000; 558/394.000; 564/133.000; 564/153.000; 564/155.000;

10593612

564/157.000; 564/158.000; 564/211.000; 564/212.000;
564/214.000; 564/218.000; 564/220.000; 564/221.000;
564/222.000; 564/223.000; 564/305.000; 564/414.000;
568/435.000

ECLA C07D207/32C4; C07D209/14; C07D231/26; C09B011/02;
C09B011/10; M07C; M07D; M07D; M07D

OS MARPAT 99:141537

AB Aromatic and heterocyclic compds. (RH), e.g. N,N-dialkylanilines, pyrazoles, pyrroles, anthracenes, and indoles, react with H₂NCH:NH₂+ AcO-(I) [3473-63-0] and an acid anhydride to form RmCH(NHCOCR₁₃)₃-m (R₁ = H or F; m = 1, 2, or 3) which, when m = 1, can be hydrolyzed to RCHO. The reaction of RH with I and acid anhydride can also be used to prepare triarylmethanes and dyes, e.g. methines and polymethines. Thus, 14.9 g Et₂NPh [91-66-7], 100 mL MePh, 11 g I, and 25 g Ac₂O [108-24-7] were stirred overnight at room temperature under N to give

p-Et₂NC₆H₄CH(NHAc)₂ (II) [87317-75-7] in 83% yield. Addition of 19 g II to 500 mL H₂O containing 25 mL

concentrated HCl, heating at 50° for 2h, and treatment with 30 mL aqueous 30%

NaOH gave p-Et₂NC₆H₄CHO [120-21-8] in 93.2% yield.

ST arom aldehyde manuf; formamidine acetate reaction arom compd; amination arom manuf; anhydride reaction formamidine arom compd; triarylmethane dye leuco

manuf; methine dye manuf

IT Aromatic compounds

RL: USES (Uses)

(condensation of, with anhydrides and formamidine acetate)

IT Aminals

RL: IMF (Industrial manufacture); PREP (Preparation)

(N-acyl, aryl, preparation and hydrolysis of)

IT Anhydrides

RL: USES (Uses)

(aliphatic, condensation of, with aromatic compds. and formamidine acetate)

IT Aldehydes, preparation

RL: PREP (Preparation)

(aryl, manufacture of, precursors for, from anhydrides, aromatic compds. and

formamidine acetate)

IT Heterocyclic compounds

RL: USES (Uses)

(nitrogen, aromatic, condensation of, with anhydrides and formamidine acetate)

IT 89-25-8 91-66-7 91-67-8 109-97-7 118-12-7 119-95-9 148-69-6

148-87-8 552-82-9 6628-07-5 41378-51-2 42988-04-5

RL: USES (Uses)

(condensation of, with acetic anhydride and formamidine acetate)

IT 120-72-9, reactions 121-69-7, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(condensation of, with acetic anhydride and formamidine acetate)

IT 3473-63-0

RL: USES (Uses)

(condensation of, with acid anhydrides and aromatic compds.)

10593612

IT 106-31-0 108-24-7 108-30-5, reactions 123-62-6 541-88-8
RL: USES (Uses)
(condensation of, with aromatic compds. and formamidine acetate)

IT 6375-46-8
RL: USES (Uses)
(condensation of, with formamidine acetate)

IT 407-25-0
RL: USES (Uses)
(condensation of, with formamidine acetate and anthracene or dimethoxybenzene)

IT 151-10-0
RL: USES (Uses)
(condensation of, with formamidine acetate and trifluoroacetic anhydride)

IT 120-12-7, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with formamidine acetate and trifluoroacetic anhydride)

IT 87317-75-7P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);
RACT
(Reactant or reagent)
(preparation and hydrolysis of)

IT 603-48-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);
RACT
(Reactant or reagent)
(preparation and oxidation of)

IT 120-21-8P 4174-09-8P 4865-00-3P 17102-89-5P 20766-56-7P
87317-58-6P 87317-59-7P 87317-60-0P 87317-61-1P 87317-62-2P
87317-63-3P 87317-64-4P 87317-65-5P 87317-66-6P 87317-67-7P
87317-68-8P 87317-69-9P 87317-70-2P 87317-71-3P 87317-72-4P
87317-73-5P 87317-74-6P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

L13 ANSWER 19 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1983:44254 CAPLUS
DN 98:44254
OREF 98:6683a,6686a
ED Entered STN: 12 May 1984
TI Pressure-sensitive recording unit
IN Asano, Makoto; Hasegawa, Kiyoharu; Akahori, Hiroyuki; Tsujimoto, Michihiro
PA Mitsui Toatsu Chemicals, Inc. , Japan
SO Eur. Pat. Appl., 92 pp.
CODEN: EPXXDW
DT Patent
LA English
IC B41M005-12
CC 74-11 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1
PATENT NO. KIND DATE APPLICATION NO. DATE

10593612

PI	EP 55847	A1	19820714	EP 1981-110736	19811223
	EP 55847	B1	19860402		
	R: BE, CH, DE, FR, GB, IT, NL				
	JP 57107882	A	19820705	JP 1980-183878	19801226
	JP 01002519	B	19890117		
	JP 58074389	A	19830504	JP 1981-172787	19811030
	JP 63037718	B	19880726		
	CA 1176462	A1	19841023	CA 1981-392953	19811222
	AU 8179001	A	19820701	AU 1981-79001	19811224
	AU 542942	B2	19850328		
	BR 8108424	A	19821013	BR 1981-8424	19811228
	CA 1215834	A1	19861230	CA 1983-436863	19830916
PRAI	JP 1980-183878	A	19801226		
	JP 1981-172787	A	19811030		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 55847	IC	B41M005-12
	IPCI	B41M0005-12 [ICM]
	IPCR	B41M0005-124 [I,C*]; B41M0005-124 [I,A]; B41M0005-132 [I,C*]; B41M0005-136 [I,A]
	ECLA	B41M005/136; L41M
JP 57107882	IPCI	B41M0005-12 [ICM]
	IPCR	B41M0005-132 [I,C*]; B41M0005-132 [I,A]; B41M0005-136 [I,A]
JP 58074389	IPCI	B41M0005-12 [ICM]
	IPCR	B41M0005-124 [I,C*]; B41M0005-124 [I,A]; B41M0005-132 [I,C*]; B41M0005-132 [I,A]; B41M0005-136 [I,A]; B41M0005-155 [I,C*]; B41M0005-155 [I,A]
CA 1176462	IPCI	B41M0005-12 [ICM]
	IPCR	B41M0005-124 [I,C*]; B41M0005-124 [I,A]; B41M0005-132 [I,C*]; B41M0005-136 [I,A]
AU 8179001	IPCI	B41M0005-16 [ICM]
	IPCR	B41M0005-124 [I,C*]; B41M0005-124 [I,A]; B41M0005-132 [I,C*]; B41M0005-136 [I,A]
	ECLA	B41M005/136; L41M
BR 8108424	IPCI	B41M0005-16 [ICM]; C09D0011-02 [ICS]
	IPCR	B41M0005-124 [I,C*]; B41M0005-124 [I,A]; B41M0005-132 [I,C*]; B41M0005-136 [I,A]
	ECLA	B41M005/136; L41M
CA 1215834	IPCI	B41M0005-18 [ICM,4]

OS MARPAT 98:44254

AB A pressure-sensitive recording unit which provides color images with great

resistance to light, solvent, and heat comprises a 1st sheet with a layer containing a dispersion of microscopic capsules enclosing a solution of a methine-type dye and an alkanol amine and/or a metal ion sequestering agent, and a 2nd sheet carrying a layer containing an organic oxidant.

Thus, a

mixture of diisopropylnaphthalene containing 4 weight parts of 3,3'-dimethyl-4,4'-diethylamino-4'-dimethylaminotriphenylmethane 12.6, 6% aqueous acid-treated gelatin containing 0.1 g of N-hydroxyethylethylenediaminetriacetic acid di-Na salt 25, and 1%

aqueous CMC

50 g was diluted by addition of 30 g of H2O, followed by addition of 10% AcOH (to

10593612

pH = 4.3), cooled to 8°, mixed with 37% HCHO 1.45 g (pH adjusted to 10.5 with 18% caustic soda), and heated to 40° to give a microcapsule suspension which was used to prepare a back-coated sheet. A paper support was coated with a composition containing kaolin 85, CaCO₃

15, styrene-butadiene latex (aqueous solution) 6, oxidized starch (aqueous solution) 10, and

2,3,5,6-tetrakis(ethoxycarbonyl)-1,4-benzoquinone (aqueous solution 40% solids) 4

weight parts to give a front-coated sheet. A pressure-sensitive recording

paper obtained by combining the above sheets together produced a deep purple image having extremely good color fastness.

ST pressure sensitive copying recording paper; methine dye alkanolamine oxidizer copying

IT Copying paper

(pressure-sensitive, with first sheet containing microencapsulated methine

dye and alkanolamine and metal ion sequestering agent and with second sheet containing organic oxidant)

IT 603-48-5 4865-00-3 13865-57-1 57752-11-1 79118-66-4
82911-15-7 82911-18-0 82911-19-1 82911-30-6 83994-83-6
83994-84-7 83994-88-1 84001-75-2 84219-09-0 84219-10-3
84219-11-4 84219-12-5 84219-13-6 84219-14-7 84219-15-8
84219-16-9 84219-17-0 84219-18-1 84219-19-2 84219-20-5
84219-21-6 84219-22-7 84219-23-8 84238-97-1 84238-98-2

RL: USES (Uses)

(pressure-sensitive copying paper containing)

IT 64-02-8 105-59-9 122-20-3 139-89-9 140-01-2 3077-13-2
5064-31-3 7517-29-5 30718-90-2 50813-16-6 83536-37-2 84219-24-9

RL: USES (Uses)

(pressure-sensitive copying paper containing dispersion of microencapsulated methine dye and)

IT 102-71-6, properties

RL: PRP (Properties)

(pressure-sensitive copying paper containing dispersion of microencapsulated methine dye and)

IT 77-90-7 78-14-8 103-23-1 117-81-7 14491-66-8 26140-60-3D,
partially hydrogenated 30172-67-9 31711-50-9 35021-68-2
38640-62-9

38641-18-8 40529-66-6 40766-31-2 84230-10-4

RL: USES (Uses)

(pressure-sensitive copying paper containing microencapsulated methine dye

and)

IT 2490-58-6 63267-02-7 84219-25-0 84219-26-1 84219-27-2
84219-28-3

84219-29-4 84219-30-7

RL: USES (Uses)

(pressure-sensitive copying paper with front-coated sheet containing)

L13 ANSWER 20 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1983:25557 CAPLUS

DN 98:25557

OREF 98:3903a,3906a

10593612

ED Entered STN: 12 May 1984
 TI Dye-containing microcapsule dispersion for recording materials
 IN Asano, Makoto; Hasegawa, Kiyoharu; Akahori, Hiroyuki; Tsujimoto, Michihiro
 PA Mitsui Toatsu Chemicals, Inc. , Japan
 SO Eur. Pat. Appl., 55 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC B41M005-12
 CC 74-11 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 58430	A1	19820825	EP 1982-101138	19820216
	EP 58430	B1	19851204		
	R: BE, CH, DE, FR, GB, IT, NL				
	JP 57135191	A	19820820	JP 1981-20128	19810216
	JP 63040678	B	19880812		
	JP 58053486	A	19830330	JP 1981-150636	19810925
	JP 02037311	B	19900823		
	JP 58062092	A	19830413	JP 1981-159440	19811008
	JP 63040679	B	19880812		
	AU 8280200	A	19820826	AU 1982-80200	19820204
	AU 545767	B2	19850801		
	US 4384871	A	19830524	US 1982-347415	19820210
	BR 8200821	A	19821228	BR 1982-821	19820216
	CA 1173647	A1	19840904	CA 1982-396372	19820216
PRAI	JP 1981-20128	A	19810216		
	JP 1981-150636	A	19810925		
	JP 1981-159440	A	19811008		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
-----	-----	-----
EP 58430	IC	B41M005-12
	IPCI	B41M0005-12 [ICM]
	IPCR	B41M0005-124 [I,C*]; B41M0005-124 [I,A]; B41M0005-132 [I,C*]; B41M0005-132 [I,A]; B41M0005-136 [I,A]
	ECLA	B41M005/132; B41M005/136; L41M
JP 57135191	IPCI	B41M0005-12 [ICM]
	IPCR	B41M0005-132 [I,C*]; B41M0005-132 [I,A]; B41M0005-136 [I,A]
JP 58053486	IPCI	B41M0005-18 [ICM]; C09B0011-10 [ICA]; C09B0011-00 [ICA,C*]
	IPCR	B41M0005-30 [I,C*]; B41M0005-323 [I,A]; B41M0005-132 [I,C*]; B41M0005-132 [I,A]; B41M0005-136 [I,A]; C09B0011-00 [I,C*]; C09B0011-00 [I,A]; C09B0011-26 [I,A]
JP 58062092	IPCI	B41M0005-12 [ICM]
	IPCR	B41M0005-132 [I,C*]; B41M0005-132 [I,A]; B41M0005-136 [I,A]
AU 8280200	IPCI	B01J0013-02 [ICM]; B41M0005-16 [ICS]; C09B0067-46 [ICS]; C09B0067-00 [ICS,C*]
	IPCR	B41M0005-124 [I,C*]; B41M0005-124 [I,A]; B41M0005-132

10593612

		[I,C*]; B41M0005-132 [I,A]; B41M0005-136 [I,A]
	ECLA	B41M005/132; B41M005/136; L41M
US 4384871	IPCI	C09B0067-00 [ICM]
	IPCR	B41M0005-124 [I,C*]; B41M0005-124 [I,A]; B41M0005-132 [I,C*]; B41M0005-132 [I,A]; B41M0005-136 [I,A]
	NCL	008/599.000; 008/636.000; 523/161.000
	ECLA	B41M005/132; B41M005/136; L41M
BR 8200821	IPCI	C09B0067-38 [ICM]; C09B0067-00 [ICM,C*]; C09D0011-02 [ICS]
	IPCR	B41M0005-124 [I,C*]; B41M0005-124 [I,A]; B41M0005-132 [I,C*]; B41M0005-132 [I,A]; B41M0005-136 [I,A]
	ECLA	B41M005/132; B41M005/136; L41M
CA 1173647	IPCI	B41M0005-16 [ICM]
	IPCR	B41M0005-124 [I,C*]; B41M0005-124 [I,A]; B41M0005-132 [I,C*]; B41M0005-132 [I,A]; B41M0005-136 [I,A]

OS MARPAT 98:25557

AB A dye-containing microcapsule dispersion for recording materials comprises

≥1 methine dye, an alkanolamine of the formula R1R2NZOH (Z = lower alkylene, hydroxyalkylene, polyoxyalkylene; R1, R2 = H, alkyl, hydroxyalkyl, aryl, aralkyl, acyl, ω-hydroxyalkyl, polyoxyalkylene, lower alkyl ether, or R1R2 together form a ring), and/or a metal ion sequestering agent. Thus, a mixture of 100 parts of phenylxylylethane containing 5 weight% of 4,4'-bis(dimethylamino)-4''-(N-benzyl-N-methylamino)triphenylmethane and an aqueous solution of acid-treated gelatin 20 g

in 160 parts of H2O (pH adjusted to 10) was emulsified, mixed with an aqueous solution containing gum arabic 20, the Me vinyl ether-maleic anhydride copolymer

Na salt 0.3, and H2O 150 parts, emulsified for 30 min at 55°, mixed with H2O 200 parts and AcOH (to adjust pH to 4.5), mixed with 37%

aqueous HCHO

at 7°, mixed with NaOH (to adjust pH to 10.5), heated to 50° to complete the microencapsulation, and mixed with tris(N-2-hydroxyethyl)amine to give a white microcapsule dispersion.

When

the tris(N-2-hydroxyethyl)amine was excluded, the resultant microcapsule dispersion was blue in color.

ST pressure sensitive recording microcapsule dispersion; copying carbonless dye microcapsule dispersion; alkanolamine methine dye microcapsule copying; metal sequestering agent alkanolamine dye

IT Copying paper

(pressure-sensitive, microcapsules containing methine dye and alkanolamine

and metal ion sequestering agents for)

IT	603-48-5	4479-33-8	4865-00-3	7355-20-6	21295-87-4
	22091-92-5	36431-21-7	67722-02-5	82911-16-8	82911-18-0
	83994-82-5	83994-83-6	83994-84-7	83994-85-8	83994-86-9
	83994-87-0	83994-88-1	84001-75-2		

RL: USES (Uses)

(microcapsules containing alkanolamine and metal ion sequestrant and, for pressure-recording materials)

IT 60-00-4D, aliphatic amides 67-42-5 67-43-6 77-92-9, uses and

10593612

miscellaneous 87-69-4, uses and miscellaneous 87-73-0 102-71-6,
uses
and miscellaneous 111-42-2, uses and miscellaneous 122-20-3
139-13-9
139-33-3 142-73-4 150-25-4 150-39-0 150-39-0D, sodium salts
482-54-2 526-95-4 869-52-3 869-52-3D, sodium salts 3148-72-9
4408-81-5 5835-28-9 8062-15-5 9003-01-4 26635-92-7 30718-90-2
83994-89-2 84013-96-7
RL: USES (Uses)
(pressure-sensitive recording material with microcapsules containing
methine dye and)

L13 ANSWER 21 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1982:43835 CAPLUS

DN 96:43835

OREF 96:7105a,7108a

ED Entered STN: 12 May 1984

TI Diazonium imaging system

IN Gatzke, Kenneth G.

PA Minnesota Mining and Manufacturing Co., USA

SO PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DT Patent

LA English

IC G03C001-60; G03C001-54; G03C001-72

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	WO 8101756	A1	19810625	WO 1980-US1444	19801027
	W: JP				
	RW: AT, CH, DE, FR, GB, LU, NL, SE				
	JP 56501503	T	19811015	JP 1981-500300	19801027
	JP 01043938	B	19890925		
	EP 41984	A1	19811223	EP 1981-900099	19801027
	EP 41984	B1	19840919		
	R: AT, CH, DE, FR, GB, LU, NL, SE				
PRAI	US 1979-101143	A	19791207		
	WO 1980-US1444	W	19801027		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
-----	----	-----
WO 8101756	IC	G03C001-60; G03C001-54; G03C001-72
	IPCI	G03C0001-60 [ICM]; G03C0001-54 [ICS]; G03C0001-52 [ICS,C*]; G03C0001-72 [ICS]
	IPCR	G03C0001-52 [I,A]; G03C0001-52 [I,C*]; G03C0001-61 [I,A]; G03C0001-72 [I,C*]; G03C0001-72 [I,A]; G03C0001-73 [I,C*]; G03C0001-73 [I,A]
	ECLA	G03C001/61; G03C001/73L
JP 56501503	IPCI	G03C0001-52 [ICM]; G03C0001-72 [ICS]
EP 41984	IPCI	G03C0001-60 [ICM]; G03C0001-54 [ICS]; G03C0001-52 [ICS,C*]; G03C0001-72 [ICS]
	ECLA	G03C001/61; G03C001/73L

OS MARPAT 96:43835

10593612

AB A light-sensitive heat-developable imaging composition for use as heat-sensitive recording material or for microfilm duplicating comprises a polymeric binder, a leuco dye and a diazonium salt. Thus, a poly(ethylene terephthalate) support was coated with a composition containing leuco crystal violet 0.051, leuco malachite green 0.046, THF 1.429, 1-diazo-2,5-diethoxy-4-morpholinobenzene borofluoride 0.1, and a binder (vinyl chloride-vinyl acetate-vinyl alc. polymer 25, Me iso-Bu ketone 37.5, and MeCOEt 37.5%) 4.8 g to give 81 μ m thickness, dried at 71°, imagewise exposed to a Hg lamp for 106 m-candle-s, and developed at 132° for 60 s to give images having Dmax = 1.05 and Dmin = 0.38.

ST diazo imaging compn thermal recording; microfilm duplicating diazo image formation

IT Diazo process
(photosensitive composition containing polymeric binder and leuco dye and diazonium salt for)

IT Vinyl acetal polymers
RL: USES (Uses)
(butyrals, as binder, for diazo imaging system)

IT Recording
(thermal, photosensitive diazo composition for)

IT 9003-22-9 9004-35-7 9004-36-8 9005-09-8 25086-48-0
RL: USES (Uses)
(as binder, for diazo imaging system)

IT 90-68-6 117-08-8 119-47-1 7292-14-0
RL: USES (Uses)
(diazo imaging composition containing, for image d. increase)

IT 456-27-9 2367-19-3 4979-72-0 5059-60-9 6023-29-6 6023-44-5
6087-56-5 6217-19-2 9070-36-4 14726-58-0 15710-69-7 17409-52-8
24564-52-1 28573-66-2 31605-03-5 33678-73-8 36422-95-4
36576-70-2 39288-51-2 50543-78-7 52018-21-0 53364-70-8
60453-96-5 67290-46-4 68052-11-9 79245-76-4
RL: USES (Uses)
(imaging composition containing leuco dye and polymeric binder and)

IT 88-99-3, uses and miscellaneous 129-73-7 548-61-8 603-48-5
1249-97-4 4865-00-3 6786-84-1 54060-86-5 75535-15-8
79320-91-5 79331-10-5
RL: USES (Uses)
(photoimaging diazo composition containing)

L13 ANSWER 22 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1981:578556 CAPLUS
DN 95:178556
OREF 95:29669a,29672a
ED Entered STN: 12 May 1984
TI Photo-induced memory effect of an organic photoconductor. Roles of leuco-dye in memory effect
AU Nishio, Yoshihiro; Inoue, Eiichi
CS Dep. Inf. Proc., Tokyo Inst. Technol., Yokohama, 227, Japan
SO Nippon Shashin Gakkaishi (1981), 44(2), 111-17
CODEN: NSGKAP; ISSN: 0369-5662

10593612

DT Journal
LA Japanese
CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)
AB The roles played by a leuco dye in photoinduced memory effect were investigated for an organic coating of poly(N-vinylcarbazole), trinitrofluorenone (TNF), and a leuco dye. Leuco dye forms a charge-transfer complex (CT) with TNF, and its optical absorption was observed in the visible region (≈ 500 nm). The origin of the photoinduced memory effect is relevant to the photoinduced chemical reaction of the CT by illumination with light corresponding to the CT band. The stable radicals were observed as an ESR signal when the CT was exposed to the visible light. The charge acceptance of the organic coating under corona discharge is controlled by injection of counter charges from the conductive substrate. It is considered that the stable radicals caused by light illumination enhance efficiency of the injection of counter charges and thus decrease the charge acceptance in the exposed area.
ST polyvinylcarbazole photomemory effect leuco dye; photoconductor photomemory effect leuco dye; nitrofluorenone polyvinylcarbazole photomemory leuco dye
IT Charge-transfer complexes
RL: USES (Uses)
(of leuco dyes with trinitrofluorenone in organic photoconductive compns., formation of, photoinduced memory effect in relation to)
IT Photoconductors
(organic, photoinduced memory effect in, leuco dye role in)
IT Memory effect, chemical and physical
(photoinduced, in organic photoconductors, leuco dye role in)
IT Dyes
(leuco, photoinduced memory effect in organic photoconductors in presence of)
IT 129-79-3
RL: USES (Uses)
(photoconductive compns. containing poly(vinylcarbazole) and, photoinduced memory effect in, leuco dye role in)
IT 25067-59-8
RL: USES (Uses)
(photoconductive compns. containing trinitrofluorenone and, photoinduced memory effect in, leuco dye role in)
IT 100-22-1 101-61-1 101-81-5 121-69-7, uses and miscellaneous
129-73-7 510-13-4 519-73-3 552-82-9 603-34-9 603-48-5
1552-42-7 2123-34-4 4865-00-3 13865-57-1 23308-55-6
24460-05-7 26602-82-4 34372-72-0 46734-13-8 75833-79-3
79610-35-8
RL: USES (Uses)
(photoinduced memory effect in organic photoconductive compns. containing)

L13 ANSWER 23 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

10593612

AN 1977:455623 CAPLUS
DN 87:55623
OREF 87:8825a,8828a
ED Entered STN: 12 May 1984
TI Detection of liquid hydrocarbons in gasoline and light oil
IN Yoshinaga, Kenji; Hama, Kinjiro
PA Sumitomo Chemical Co., Ltd., Japan
SO Ger. Offen., 26 pp.
CODEN: GWXXBX
DT Patent
LA German
IC G01N033-22
CC 51-6 (Fossil Fuels, Derivatives, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	DE 2639851	A1	19770317	DE 1976-2639851	19760903
	JP 52031793	A	19770310	JP 1975-107761	19750904
	JP 52096593	A	19770813	JP 1976-13560	19760209
	FR 2323141	A1	19770401	FR 1976-26586	19760903
	FR 2323141	B1	19790511		
PRAI	JP 1975-107761	A	19750904		
	JP 1976-13560	A	19760209		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
-----	----	-----
DE 2639851	IC	G01N033-22
	IPCI	G01N0033-22; G01N0031-22
	IPCR	G01N0031-22 [I,C*]; G01N0031-22 [I,A]
JP 52031793	IPCI	G01N0031-22; G01N0021-20; G01N0033-28; G01N0033-26
[C*]	IPCR	G01N0033-22 [I,C*]; G01N0033-22 [I,A]; G01N0031-22 [I,C*]; G01N0031-22 [I,A]; G01N0033-26 [I,C*]; G01N0033-28 [I,A]
JP 52096593	IPCI	G01N0033-26; G01N0031-22; G01N0021-06; G01N0001-10
	IPCR	G01N0031-00 [I,C*]; G01N0031-00 [I,A]; G01N0001-10 [I,C*]; G01N0001-10 [I,A]; G01N0031-22 [I,C*]; G01N0031-22 [I,A]; G01N0033-22 [I,C*]; G01N0033-22 [I,A]; G01N0033-26 [I,C*]; G01N0033-26 [I,A]
FR 2323141	IPCI	G01N0021-06; G01N0031-22
	IPCR	G01N0031-22 [I,C*]; G01N0031-22 [I,A]

AB A detection method for illegal diluents (such as benzene [71-43-2], toluene [108-88-3], xylene [1330-20-7] or kerosine) in gasoline or light oil comprises adding colorless reducing chromogenic compds., such as Crystal Violet lactone [1552-42-7], to the gasoline or light oil and stirring the solution with an open-end tube containing an oxidizing agent such as activated silica gel clay. The degree of color change in the clay indicates the amount of cutting agent present.

ST gasoline benzene detection; xylene detection light oil; toluene detection gasoline; kerosine detection gasoline; colorimetry hydrocarbon detection gasoline

IT Gasoline
Hydrocarbon oils
RL: USES (Uses)

10593612

(detection of benzene derivs. and kerosine in, method for)

IT Colorimetry
(detection of benzenes and kerosine by, in gasoline or light oil)

IT Kerosine
RL: ANT (Analyte); ANST (Analytical study)
(detection of, in gasoline or light oil, method for)

IT Silica gel, uses and miscellaneous
RL: USES (Uses)
(oxidizing agent, for colorimetric detection of aromatic hydrocarbons

and
kerosine in gasoline or light oil)

IT Clays, uses and miscellaneous
RL: USES (Uses)
(acidic, oxidizing agents, for colorimetric detection of benzenes and
kerosine in gasoline or light oil)

IT 71-43-2, analysis 108-88-3, analysis 1330-20-7, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detection of, in gasoline or light oil, method for)

IT 1249-97-4 1552-42-7 4865-00-3 21121-61-9 26628-47-7
34372-72-0
RL: USES (Uses)
(indicators, for colorimetric detection of benzene derivs. and

kerosine
in gasoline or light oil)

IT 1344-28-1, uses and miscellaneous 9003-35-4
RL: USES (Uses)
(oxidizing agents, for colorimetric detection of benzenes and kerosine
in gasoline or light oil)

L13 ANSWER 24 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1971:499245 CAPLUS
DN 75:99245
OREF 75:15691a,15694a
ED Entered STN: 12 May 1984
TI Biimidazole-sensitized photooxidation of leuco triphenylmethane dyes
AU MacLachlan, Alexander; Riem, R. H.
CS Exp. Stn., E. I. du Pont de Nemours and Co., Wilmington, DE, USA
SO Journal of Organic Chemistry (1971), 36(16), 2275-80
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English
CC 40 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
AB Oxidation of tris(2-methyl-4-diethylaminophenyl)methane by photogenerated
2-(o-chlorophenyl)-4,5-diphenylimidazolyl radical (L•) was studied by
flash photolysis. An electron-exchange reaction involving L• occurs
at an unprotonated amino N of the leuco dye and is responsible for the
first oxidation step. Subsequent reactions do not involve the L•
radical
and depend only on the structure of the leuco dye and environmental
effects. The influence of pH on both the course and rate of the
dye-forming reaction is discussed.

ST brimidazole sensitized photooxidn leuco dye; leuco triphenylmethane dye
photooxidn; imidazole sensitized photooxidn leuco dye

IT Dyes
(leuco triphenylmethane derivs., photooxidn. of)

10593612

IT Kinetics of oxidation
(photochem., of leuco triphenylmethane dyes)
IT 29897-74-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation by, of leuco triphenylmethane dyes)
IT 4482-56-8 4482-70-6 4865-00-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, by (chlorophenyl)diphenylimidazolyl)
IT 1707-68-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(photolysis of, kinetics of)

L13 ANSWER 25 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1971:497951 CAPLUS
DN 75:97951
OREF 75:15485a,15488a
ED Entered STN: 12 May 1984
TI Flash photolysis of a substituted hexaarylbiimidazole and reactions of
the
imidazolyl radical
AU Coraor, G. R.; Riem, R. H.; MacLachlan, A.; Urban, E. J.
CS Exp. Stn., E. I. du Pont de Nemours and Co., Wilmington, DE, USA
SO Journal of Organic Chemistry (1971), 36(16), 2272-5
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA English
CC 22 (Physical Organic Chemistry)
AB The rate of reactions of 2-(o-chlorophenyl)-4,5-diphenylimidazolyl
radicals
(L \cdot) with additives was studied in various solvents. Evidence
based on measured rate consts., including kinetic D isotope effects,
prove
that the ratedetg. step in the reactions $\text{L}\cdot + \text{aromatic amine}$ is an
electron exchange reactions at the amino N, while in the reactions
 $\text{L}\cdot + \text{hydroquinone}$ the rate-determining step is H abstraction.
ST kinetics imidazolyl radical reaction; flash photolysis
hexaarylbiimidazoles; biimidazoles aryl photolysis
IT Isotopic effects
(in (chlorophenyl)diphenylimidazolyl reactions with hydroquinone, by
deuterium)
IT Kinetics of photolysis
(of bis(chlorophenyl)tetraphenylbiimidazole, in presence of amines)
IT Substituent constants
(of tertiary aniline derivs., reactions with
(chlorophenyl)diphenylimidazolyl in relation to)
IT Amines, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(with (chlorophenyl)diphenylimidazolyl of tertiary aromatic, kinetics
of)
IT 7782-39-0, properties
RL: PRP (Properties)
(isotopic effect of, in (chlorophenyl)diphenylimidazolyl reactions
with
hydroquinone)
IT 1707-68-2

10593612

RL: RCT (Reactant); RACT (Reactant or reagent)
(photolysis of, kinetics of flash, in presence of amines)
IT 91-66-7 99-97-8 100-22-1 2873-89-4 2873-90-7 4482-70-6
4865-00-3 15144-80-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of, with (chlorophenyl)diphenylimidazolyl, kinetics of)
IT 29897-74-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of, with amines and with hydroquinone, kinetics of)
IT 123-31-9, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(with (chlorophenyl)diphenylimidazolyl, kinetics of)

L13 ANSWER 26 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1968:91872 CAPLUS

DN 68:91872

OREF 68:17723a,17726a

ED Entered STN: 12 May 1984

TI Light sensitive leuco dye-diacyl azine mixture

IN Yembrick, Charles, Jr.

PA du Pont de Nemours, E. I., and Co.

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

INCL 096090000

CC 74 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3364030	A	19680116	US 1964-363593	19640429
PRAI	US 1964-363593		19640429		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3364030	INCL	096090000
	IPCR	G03C0001-73 [I,C*]; G03C0001-73 [I,A]
	NCL	430/332.000; 430/340.000; 430/343.000; 430/538.000
	ECLA	G03C001/73L

AB A mixture of a leuco dye and a diacylazine is converted to the corresponding

dye by exposure to uv radiation. Direct positives are obtained from polymeric matrixes containing this mixture Useful leuco dyes include aminotriarylmethanes, aminoxanthenes, amino-9,10-dihydroacridines, aminophenoxazines, aminophenothiazines, aminodihydrophenazines, aminodiphenylmethanes, aminohydrocinnamic acids, leucoindigoid dyes, 1,4-diamino-2,3-dihydroanthraquinones, 1,4-bis(4,5-diaryl-2-imidazolyl)benzenes, and hydroxyphenyldiarylimidazoles. A piece of filter paper is saturated with a solution of 0.5 g. 2-(diacetyl amino)benzotriazole (I) and 0.5 g. tris(4-diethylamino-o-tolyl)methane-ZnCl₂-HCl in 1000 g. HCONMe₂, dried in the dark, and exposed through a stencil to a 275-w. sun lamp to give a blue image. These compns. are useful in printing, radiation dosimeters,

10593612

preparing layouts for metal working, and preparing blueprints.

ST DIRECT POS LEUCO DYE DIACYLAZINE; LEUCO DYE DIACYLAZINE DIRECT POS;
DIACYLAZINE LEUCO DYE DIRECT POS; POS DIRECT LEUCO DYE DIACYLAZINE; DYE
LEUCO DIACYLAZINE DIRECT POS

IT Photography
(direct-pos., with leuco dye-diacyl azine mixts.)

IT 4482-56-8 4482-70-6 4865-00-3 18682-64-9 19447-48-4
RL: USES (Uses)
(light-sensitive compns. from diacyl azine compound and, for
direct-pos.
images)

IT 19447-52-0 19447-53-1 19447-54-2 19447-55-3 19447-56-4
19476-24-5
RL: USES (Uses)
(light-sensitive compns. from leuco dyes and, for direct-pos. images)

L13 ANSWER 27 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1967:70823 CAPLUS
DN 66:70823
OREF 66:13311a,13314a
ED Entered STN: 12 May 1984
TI Carbon tetrachloride sensitized photooxidation of leuco ethyl crystal
violet
AU MacLachlan, Alexander
CS Exptl. Sta., E. I. du Pont de Nemours and Co., Wilmington, DE, USA
SO Journal of Physical Chemistry (1967), 71(3), 718-22
CODEN: JPCHAX; ISSN: 0022-3654
DT Journal
LA English
CC 74 (Radiation Chemistry, Photochemistry, and Photographic Processes)
AB Based on direct observation of many of the reaction intermediates, a
mechanism for halocarbon-sensitized oxidation of leuco ethyl crystal
violet
to the corresponding dye is presented. Sensitization occurs via the
leuco
dye's singlet and triplet states and leads to a radical-ion intermediate
rather than the triphenylmethyl radical directly. Rate consts. of most
of
the reactions are given. Solvent effects on the various steps are
studied.

ST PHOTOOXIDN LEUCO ET CRYSTAL VIOLET; LEUCO ET CRYSTAL VIOLET PHOTOOXIDN;
CRYSTAL VIOLET LEUCO ET PHOTOOXIDN

IT Kinetics of oxidation
(photochem., of leuco ethyl crystal violet sensitized by carbon
tetrachloride)

IT Kinetics of oxidation
Oxidation
(photochem., of leuco ethyl crystal violet sensitized by carbon
tetrachloride, mechanism of)

IT 56-23-5, uses and miscellaneous
RL: USES (Uses)
(leuco ethyl crystal violet photochem. oxidation sensitized by,
kinetics
and mechanism of)

IT 4865-00-3

10593612

RL: USES (Uses)
(oxidation (photochem.) of, sensitized by carbon tetrachloride,
kinetics
and mechanism of)

L13 ANSWER 28 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1966:22937 CAPLUS

DN 64:22937

OREF 64:4238f-h, 4239a-b

ED Entered STN: 22 Apr 2001

TI Triarylmethane dyes as redox indicators

AU Brazier, J. N.; Stephen, W. I.

CS Univ. Birmingham, UK

SO Analytica Chimica Acta (1965), 33(6), 625-38

CODEN: ACACAM; ISSN: 0003-2670

DT Journal

LA English

CC 2 (Analytical Chemistry)

AB The properties were studied of 53 triarylmethane dyes (5 previously recommended), as indicators in conventional redox titrns. One drop of an aqueous 0.1% dye solution was added to 1 mL. of F H₂SO₄ containing a few drops of

0.01N Fe(NH₄)₂(SO₄)₂; the color was noted and 0.01N Ce(SO₄)₂ was added dropwise until present in excess. Any color change was noted and the change was reversed by addition of the 0.01N Fe²⁺-F H₂SO₄. The dyes were tested in titrns. of 10 mL. of 0.01N Fe²⁺ in F H₂SO₄ vs. 0.01N Ce(SO₄)₂

in

F H₂SO₄; .apprx.0.5 mL. from the end point, 0.5 mL. of an aqueous 0.1% dye

solution and 0.5 mL. of 2F H₂SO₄ were added. The titration was continued to the

color change of the dye; the reverse titrns. were also performed. Potentiometric titrns. were made for comparison. C.I. 42050, 42051, 42090, 42135, 42571, 42595, 42705, 42735, 44025, 44040, and Basic Blue 23 were satisfactory as indicators for the Fe²⁺+Ce⁴⁺ titration in F H₂SO₄;

or in

F HClO₄ with 0.01 and 0.001N Ce(ClO₄)₄ (Smith and Getz, CA 34, 46881) and Fe(ClO₄)₂; however, the ferroin indicators are superior. Attempts to measure the formal redox potentials of the indicators resulted in the irreversible oxidation of the dye by 0.01N Ce(SO₄)₂, without obtaining a stable electromotive force value. The transition potentials (the

electromotive force at which the color

transition occurred) of the indicators in titrns., and reverse titrns.,

of

0.001N Fe²⁺ vs. 0.001N Ce⁴⁺ in F H₂SO₄, and in F HClO₄, are 945-1005 to 1125-65; and 1060-1125 to 1145-85 mv., resp. The electromotive force breaks in F H₂SO₄

or F HClO₄ are: Fe³⁺/Ce⁴⁺ 820-1220, 900-1450; and Ce⁴⁺/Fe²⁺ 1260-820, 1500-900 mv., resp. None of the dyes was satisfactory as indicator for titrns. with Cr₂O₇²⁻, OCl⁻, or chloramine-T. Regina Purple (C.I. 42515) (I) is recommended as the indicator for the titration of As³⁺ with IO₃⁻

in 5F

HCl. I(0.5 mL. of aqueous 0.1%) was added when the iodine color faded; the

green which appeared immediately before the end point gave good warning of

the vivid change to the purple color. The color change of I is irreversible. I (and also Basic Blue 15, C.I. 44085) was used as indicator in titrns. with IO_3^- of I-, NH_2OH , As_3^+ , Sb_3^+ , and Sn^{2+} . I is a mixture, the properties of which remained constant after recrystn. from H_2O and EtOH . In BrO_3^- titrns., I or C.I. 44085 had to be added close to the end point to avoid premature oxidation. They were no better than the accepted indicators. In the iodine- $\text{Na}_2\text{S}_2\text{O}_3$ titration at pH 4 and 7, the color change of Basic Blue 11 (C.I. 44040) (II) from yellow-green to ultramarine, is as sharp and sensitive ($2.5 \times 10^{-5}\text{N}$ I in KI) as that of com. starch-urea. II is superior to malachite green as indicator for iodometry in aqueous-alc. solns. or in high salt concns. The indicator properties were examined analogously of phthalocyanine dyes C.I. 74140, 74160, 74180, 74200, 74240, 74250, 76260, and 74350; the results were neg. C.I. 74140 had a transition potential of 935-90 mv. in F H_2SO_4 , and 985-1035 mv. in F HClO_4 . 36 refs.

IT Iodates
(in oxidation-reduction titrns., indicator for)

IT Potential, electric
(oxidation-reduction, of phthalocyanine and triarylmethane dyes)

IT Indicators (for titration)
(oxidation-reduction, triarylmethane dyes as)

IT Bromates
(titration (oxidation-reduction) of, indicator for)

IT Iodides
(titration of, indicator for oxidation-reduction)

IT Thiosulfates
(titration of, with I, oxidation-reduction indicators for)

IT Iodometry
(triarylmethane dyes as indicators for)

IT Dyes
(triarylmethane, as oxidation-reduction indicators)

IT Copper, [dihydrogen 3,3'-phthalocyaninedisulfonato(2-)]-, disodium salt
Methasol Fast Blue 2G
(as oxidation-reduction indicator)

IT 1330-38-7 2390-59-2 3626-42-4 4631-38-3 5905-37-3 6483-73-4
30586-17-5 98128-59-7
(Derived from data in the 7th Collective Formula Index (1962-1966))

IT 82-94-0, C.I. Basic Blue 20 147-14-8, Copper, [phthalocyaninato(2-)]-
569-64-2, C.I. Basic Green 4 633-03-4, C.I. Basic Green 1 1324-62-5,
C.I. Acid Blue 88 1324-69-2, C.I. Acid Blue 86 1324-81-8, C.I. Acid
Blue 97 1324-86-3, C.I. Direct Blue 41 1328-53-6, C.I. Pigment Green
7
1667-99-8, C.I. Mordant Blue 29 1796-92-5, C.I. Mordant Blue 1
2152-64-9, C.I. Solvent Blue 23 2185-86-6, C.I. Basic Blue 11
2947-64-0, C.I. Mordant Violet 16 3244-88-0, C.I. Acid Violet 19
3248-91-7, C.I. Basic Violet 2 3267-40-1, C.I. Mordant Blue 47
3486-30-4, C.I. Acid Blue 7 3564-18-9, C.I. Mordant Blue 3 4197-25-5,

10593612

C.I. Solvent Black 3 4865-00-3, C.I. Basic Violet 4, leuco
5141-20-8, C.I. Acid Green 5 5844-05-3, C.I. Acid Violet 38
5844-07-5,
C.I. Acid Blue 24 5852-33-5, C.I. Mordant Violet 11 5863-46-7, C.I.
Acid Blue 15 5863-47-8, C.I. Acid Blue 100 5863-51-4, C.I. Acid Green
22 5863-53-6, C.I. Acid Blue 13 5905-33-9, C.I. Basic Blue 18
6104-58-1, C.I. Acid Blue 90 6104-59-2, C.I. Acid Blue 83 6416-29-1,
C.I. Acid Green 8 6505-30-2, C.I. Acid Blue 104 6661-40-1, C.I. Acid
Blue 123 6837-67-8, C.I. Mordant Blue 28 7253-35-2, C.I. Acid Blue
109 7452-51-9, C.I. Mordant Violet 1 7452-52-0, C.I. Mordant Violet 28
8004-90-8, C.I. Acid Blue 119 8027-88-1, Regina Purple 21973-92-2,
C.I. Acid Green 7 25329-62-8, C.I. Acid Violet 21 28631-66-5, C.I.
Acid Blue 22 28983-56-4, C.I. Acid Blue 93 30586-15-3, C.I. Acid Blue
48 54327-10-5, Methyl green 62152-67-4, C.I. Acid Blue 110
75881-23-1, C.I. Ingrain Blue I 124148-24-9, C.I. Solvent Blue 125
(as oxidation-reduction indicator)
IT 7440-36-0, Antimony
(detection or determination of, titration (oxidation-reduction) of,
indicator for)
IT 128846-37-7, Phthalocyanine, copper complex
(dyes from, as oxidation-reduction indicators)
IT 7439-89-6, Iron
(hydration of Fe(II) by Ce(IV), oxidation-reduction indicators for)
IT 1325-95-7P, C.I. Acid Violet 24 4692-38-0P, C.I. Basic Blue 15
25305-64-0P, C.I. Acid Blue 103 68993-80-6P, Alkali Blue
114654-28-3P,
Soluble Blue
RL: PREP (Preparation)
(preparation of)
IT 7440-31-5, Tin 71163-24-1, Hydroxylamine, tetrachloroaluminate
(titration (oxidation-reduction) of, indicator for)
IT 7440-38-2, Arsenic
(titration of As(III) with iodates, oxidation-reduction indicator for)
IT 7440-45-1, Cerium
(titration of Ce(IV) by Fe(II), oxidation-reduction indicators in)
IT 74-82-8, Methane
(triaryl derivs., as oxidation-reduction indicators)

L13 ANSWER 29 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1965:459818 CAPLUS
DN 63:59818
OREF 63:10906g-h,10907a
ED Entered STN: 22 Apr 2001
TI Non-silver halide photographic material
IN Sprague, Robert H.; Stewart, John A.; Lewis, James M.
PA Horizons Inc.
SO 17 pp.
DT Patent
LA Unavailable
CC 11 (Radiation Chemistry and Photochemistry)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
PI BE 646106		19460731	BE	

10593612

FR 1395101

FR

PRAI US

19630404

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

AB A photographic film consists of a light-gray or pink mixture of a leuco base of a triphenylmethane or xanthene dye and an organic S activator, coated on a suitable base with a plastic binder. On exposure to light the activator catalyzes the oxidation of the leuco base to form a colored image. The image is fixed either by washing out the residual leuco base with solvent, or by heating the system to 125°. The activators are usually heterocyclic mercaptans. Thus, a solution containing 3,6-bis(dimethylamino)-9-[p-(dimethylamino)phenyl]xanthene 100 and 2-mercaptobenzothiazole 100 mg. in 2 cc. acetone was mixed with 2 cc. of 10% polystyrene in benzene, and coated to give a wet thickness of 30 μ . After drying, exposure to light, and fixing by two rinsings in 1:4 acetone-petr. ether, the fog d. to green light was 0.07 and the maximum d. was 2.88. After a 4 min. exposure to bright light, the speed, as the reciprocal of the initial exposure in m.-candlesecs. to give a d. of 0.2 above fog, was $1.2 + 10^{-3}$, and the maximum d. to green light was 1.53 with a fog d. of 0.20.

IT Photography

(emulsions and sensitive materials or layers for, containing leuco base of triphenylmethane or xanthene dyes and organic S activator)

IT 637-53-6 2481-86-9 2637-34-5 73018-10-7
(Derived from data in the 7th Collective Formula Index (1962-1966))

IT 2382-96-9, 2-Benzoxazolethiol
(photographic emulsion containing)

IT 60-56-0, Imidazole-2-thiol, 1-methyl- 79-45-8, Carbamic acid, dimethyldithio- 86-93-1, 1H-Tetrazole-5-thiol, 1-phenyl- 102-08-9, Carbanilide, thio- 120-78-5, Benzothiazole, 2,2'-dithiobis- 141-84-4, Rhodanine 149-30-4, 2-Benzothiazolethiol 583-39-1, 2-Benzimidazolethiol 1199-03-7, 2,3-Quinoxalinedithiol 2103-88-0, 2-Thiazolethiol, 4-phenyl- 2295-31-0, 2,4-Thiazolidinedione

2637-37-8,
Carbostyryl, thio- 2889-13-6, Quinoline, 2,2'-dithiodi- 4556-23-4, 4-Pyridinethiol 4822-40-6, Indole, 2,2'-dithiobis[3-phenyl- 4822-44-0,

Acetanilide, 2-mercapto- 4822-47-3, Naphtho[1,2-d]thiazole, 2,2'-dithiobis- 4845-58-3, 2-Benzothiazolethiol, 6-nitro- 4845-64-1, Naphtho[1,2-d]thiazole-2-thiol 4864-98-6, Indole, 2,2'-dithiobis[4-phenyl- 12758-33-7, Thiazolinethiol 22869-75-6, 2-Pyridinethiol, 1-oxide, Sn complex

(photographic emulsion containing leuco base of triphenylmethane or xanthene dye and)

IT 3191-58-0, Xanthene-3,6-diamine, 9-[p-(dimethylamino)phenyl]-N,N,N',N'-tetramethyl- 4327-93-9, Xanthene-3,6-diamine, 9-[p-(dimethylamino)phenyl]-N,N,N',N'-tetraethyl- 4822-48-4, Diphenylamine, 4,4'',4'''-methylidynetris- 4865-00-3, Aniline,

10593612

4,4',4''-methylidynetris[N,N-diethyl-
(photographic emulsion containing, in presence of organic S activator)

L13 ANSWER 30 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1965:91507 CAPLUS

DN 62:91507

OREF 62:16416f-h,16417a-b

ED Entered STN: 22 Apr 2001

TI Catalytic condensation of carbon tetrachloride with secondary aromatic amines

AU Reichel, J.; Vilceanu, R.; Schmidt, W.

CS Acad. R.P.R., Timisoara

SO Revue Roumaine de Chimie (1964), 9(11), 743-9

CODEN: RRCHAX; ISSN: 0035-3930

DT Journal

LA German

CC 46 (Dyes)

AB cf. Studii Cercetari Chim. Bucharest 13(11), 751-6(1964) (Rumanian). A new

process was developed for the synthesis of triphenylmethanes dyes, based on the condensation of aromatic amines and secondary heterocyclic amines with CCl_4 in the presence of AlCl_3 as catalyst. Ph_2NH (68 g.) was dissolved in 70 cc. $\text{C}_6\text{H}_3\text{Cl}_3$, stirred at room temperature, 44.8 g.

anhydrous AlCl_3

was added in small portions, accompanied by an increase in temperature to $50-5^\circ$ and a color change from yellow-brown to olive-green. After heating to $65-70^\circ$ 25.8 g. CCl_4 was added slowly with stirring, the blue solution was heated 1 hr. at 70° , then for 4-5 hrs. up to $138-40^\circ$, the temperature held for 5-6 hrs. (until evolution of HCl , starting at 120° , had ceased completely). The reaction mixture was cooled to 100° poured into iced water, the solvent steam distilled, and the crude reaction product (Diphenylamine Blue) was extracted with

hot

C_6H_6 (recovery 29%) to yield a powder with bronze reflex in 92.8% yield. Optimal reaction conditions were: rigorous temperature control to prevent violent reaction or explosion in the initial stages, $\text{Ph}_2\text{NH}/\text{AlCl}_3$ ratio 3:2.5, and inert solvent with a high b.p., especially $\text{C}_6\text{H}_3\text{Cl}_3$ (the

condensation

did not occur in PhNO_2 while $\text{o-Cl}_2\text{C}_6\text{H}_4$, was not sufficiently stable). Carbazole (34 g.) was dissolved in 120 cc. $\text{o-Cl}_2\text{C}_6\text{H}_4$, 22.4 g. AlCl_3 and (at 65°) 13 g. CCl_4 were added gradually, the mixture stirred 45 min. at 70° , heated slowly to 120° , kept for 2-3 hrs., the reaction products were poured into iced water, the solvent steam distilled, and the resin extracted with Me_2CO to yield 24

g.

dark-blue powder, soluble in cold concentrated H_2SO_4 . Similarly, Ethyl Violet was

prepared by heating PhNEt_2 and CCl_4 in $\text{o-Cl}_2\text{C}_6\text{H}_4$ 90 min. at 75° and 14 hrs. at $130-5^\circ$. The unchanged PhNEt_2 was

recovered from the crude product by steam distillation after addition of NaOH , and

the dye was dissolved in hot dilute $\text{HCl} + \text{NaCl}$ (65% yield). Carbazole was

treated with MeNO_2 in a suspension of AlCl_3 in $\text{o-Cl}_2\text{C}_6\text{H}_4$, no exotherm being observed. The mixture was heated 2 hrs. at 65° , 2

10593612

hrs. at 70-5° and for 30 min. at ≤100°, then slowly up to 120°, where it was kept for 7 hrs. After standing overnight at room temperature, the mixture was heated 4 hrs. at 120°, the o-Cl₂C₆H₄ was steam distilled, and the carbazole was extracted from the crude filtered product by 3 stage extraction with hot acetone, leaving the pure dark violet product. This product was identical with that obtained with carbazole in the absence of MeNO₂. The reaction could not be applied to PhNH₂ or PhNHAc.

IT Amines
(reactions of secondary aromatic, with CCl₄)
IT Diphenylamine Blue
RL: PREP (Preparation)
(preparation of)
IT 2390-59-2
(Derived from data in the 7th Collective Formula Index (1962-1966))
IT 4865-00-3P, C.I. Basic Violet 4, leuco
RL: PREP (Preparation)
(preparation of)
IT 86-74-8, Carbazole 122-39-4, Diphenylamine
(reaction with CCl₄)
IT 56-23-5, Carbon tetrachloride
(reaction with secondary aryl amines)

L13 ANSWER 31 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1964:411898 CAPLUS

DN 61:11898

OREF 61:2002b-c

ED Entered STN: 22 Apr 2001

TI Polyurethan fibers containing a colorless leuco derivative of a blue-violet dye

IN Ultee, Arnoldus J.

PA E. I. du Pont de Nemours & Co.

SO 3 pp.

DT Patent

LA Unavailable

INCL 260037000

CC 47 (Textiles)

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3133036		19640512	US 1960-67464	19601107

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3133036	INCL	260037000
	IPCR	D01F0006-58 [I,C*]; D01F0006-72 [I,A]
	NCL	524/589.000; 524/255.000

AB A polyurethan (I) spandex fiber which does not discolor from the oxidative action of nitric fumes (II) or Cl, and in which photo-yellowing is minimized, can be produced by incorporating into the I mixture an essentially colorless leuco derivative of a blue-violet dye. The leuco derivative is convertible to the dye by the oxidative action of II or Cl. With the proper choice of shade and concentration, the dyes mask the yellowness in the

10593612

polymer by gradually generating the complementary blueviolet shade. The leuco derivs. may be added before or during the formation of I and in an amount sufficient to maintain the white color of the fiber, such an amount

being from 10 to 500 p.p.m. based on I.

IT Fibers, synthetic

(from urethan polymers, elastomers, oxidation and yellowing inhibition by

leuco derivs. of blue-violet dyes)

IT Dyes

(leuco derivs. of blue-violet, urethan elastomer fiber discoloration and oxidation inhibition by)

IT Discoloration

(of urethan polymers, leuco derivs. of blue-violet dyes in prevention of yellow)

IT Spandex

(oxidation by Cl or HNO₃ and photo-yellowing of, inhibition by leuco derivs. of blueviolet dyes)

IT Rubber, substitute and synthetic

(urethan polymers as, oxidation and yellowing of fibers from, inhibition

by leuco derivs. of blue-violet dyes)

IT 603-48-5, Aniline, 4,4',4''-methylidynetris[N,N-dimethyl-

4865-00-3, Aniline, 4,4',4''-methylidynetris[N,N-diethyl-

(urethan polymer fiber discoloration and yellowing prevention by)

L13 ANSWER 32 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1964:91424 CAPLUS

DN 60:91424

OREF 60:16019e-f

ED Entered STN: 22 Apr 2001

TI The anodic oxidation of triphenylmethane dyes

AU Galus, Z.; Adams, Ralph N.

CS Univ. of Kansas, Lawrence

SO Journal of the American Chemical Society (1964), 86(9), 1666-71

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA Unavailable

CC 46 (Dyes)

AB The anodic oxidation pathways of several typical triphenylmethane dyes were

examined in acidic buffers. The oxidation of crystal violet and malachite

green leads to the formation of the oxidized form of

N,N,N',N'-tetramethylbenzidine. This was shown to be an unusual reaction in which the central C residue is ejected followed by intracoupling to give the benzidine derivative The role of hydrated forms of the dyes in

these

reactions was studied.

IT Oxidation

(electrochem. or electrolytic, of triphenylmethane dyes)

IT Dyes

(triphenylmethane, anodic oxidation of)

IT 2390-59-2 104667-39-2 107385-93-3

(Derived from data in the 7th Collective Formula Index (1962-1966))

10593612

- IT 3571-36-6, Ammonium, [4-[p-(diethylamino)- α -phenylbenzylidene]-2,5-cyclohexadien-1-ylidene]diethyl, chloride
(anodic oxidation of)
- IT 366-29-0P, Benzidine, N,N,N',N'-tetramethyl-
RL: PREP (Preparation)
(formation of, in anodic oxidation of crystal violet and malechite green)
- IT 548-62-9, C.I. Basic Violet 3 569-64-2, C.I. Basic Green 4
4865-00-3, C.I. Basic Violet 4, leuco
(oxidation (anodic) of)

L13 ANSWER 33 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1964:20619 CAPLUS

DN 60:20619

OREF 60:3630d-g

ED Entered STN: 22 Apr 2001

TI Optical properties of concentrated solutions, melts, and films of dyes.

II

AU Rubinov, V. M.; Kizel, V. A.

SO Optika i Spektroskopiya (1963), 15(4), 512-21

CODEN: OPSPAM; ISSN: 0030-4034

DT Journal

LA Unavailable

CC 10 (Spectra and Some Other Optical Properties)

AB cf. CA 54, 21997h. Detns. were made of the effects of the concentration (10⁻³-10⁻⁶ g./ml.) and the temperature (20 and 90°) on the shape of the absorption spectra (in particular, the long-wave singlet) of the following

compds.: (group I) methyl violet, fuchsin, methyl blue, Rhodamine 6G, nitrosodimethylaniline; (group II) naphthionic acid, quinine, and Na salicylate. Solid films of these compds. were obtained by precipitation

from hot

EtOH (except Na salicylate, which was precipitated from water) on a quartz plate.

Aniline, benzyl alc., EtOH, and water were used as solvents. The compds. of group I exhibited a strong dependence of the luminescence quenching on the concentration; group II did not show such a dependence. The positions of the

radiation and absorption spectra of the compds. belonging to group I overlapped. Intramol. distances in the quenching process are greater

than

during the decrease in the absorption. Thus, an induction interaction exists between identical mols., not only during radiation but also during the absorption process. In the resonance interaction, not only excited mols., which are in a statistical equilibrium level following the absorption of

light and the subsequent redistribution of the excess of vibrational energy, can participate, but also mols. that are in the process of the redistribution at higher levels with a shorter lifetime. The shape of absorption curves varied with the concentration, but the shape of the luminescence curves remained unchanged. This indicates that intramol. interaction results in the lowering and the deformation of those levels onto which the mol. arrives after the absorption of energy. The luminescence is due to the statistical equilibrium levels when only the number of

10593612

emitting mols. changes. 18 references.
IT Dyes
 (luminescence and spectra of)
IT Optical properties
 (of dye films, melts and solns.)
IT Spectra, visible and ultraviolet
 (of dyes)
IT Luminescence
 (of dyes, quenching of)
IT 3565-40-0 53324-05-3
 (Derived from data in the 7th Collective Formula Index (1962-1966))
IT 54-21-7, Sodium salicylate 61-73-4, C.I. Basic Blue 9 130-95-0,
 Quinine 138-89-6, Aniline, N,N-dimethyl-p-nitroso- 632-99-5, C.I.
 Basic Violet 14 4865-00-3, C.I. Basic Violet 3, leuco form
 7682-83-9, Benzoic acid,
o-[6-(ethylamino)-3-(ethylimino)-2,7-dimethyl-3H-
 xanthen-9-yl]-, ethyl ester hydrochloride 47453-23-6, Quinolinium,
 6-ethoxy-1-methyl-2-(m-nitrostyryl)-
 (luminescence and spectrum of)

L13 ANSWER 34 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN

AN 1962:483807 CAPLUS

DN 57:83807

OREF 57:16791b-d

ED Entered STN: 22 Apr 2001

TI Anodic oxidation of triphenylmethane dyes

AU Galus, Z.; Adams, Ralph N.

CS Univ. of Kansas, Lawrence

SO Journal of the American Chemical Society (1962), 84, 3207-8

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA Unavailable

CC 44 (Dyes)

AB Crystal violet (CV), malachite green, and (4-Me2NC6H4)2CH2 (I) gave
(4-Me2NC6H4)2 (II) and its corresponding diquinoid (III) upon oxidation
at Pt

and C electrodes in acidic aqueous buffers (pH 3.8) (ibid. 2061). The
reaction took place via the ejection of an integral group composed of the
central C atom attached to a phenyl group. In the oxidation of I, H2CO
resulted. The ethylated dyes ethyl violet and brilliant green gave
(4-Et2NC6H4)2. Thus, the central C of triphenylmethane dyes is a labile
portion of the complex mol. CV oxidized at approx. 0.8 v. vs. S.C.E. in

1N
H2SO4-Na2SO4. With a 2 v./min. triangular wave sweep, no oxidation at
less

than 0.8 v. was evident at the first anodic sweep. On the second and all
subsequent sweeps, a reversible redox system was found at the anodic
potential 0.55 v. The anodic and cathodic half-peak potential of this
system corresponded within 2 mv. with those of the system II-III in the
same medium.

IT Oxidation

 (electrochem. or electrolytic, of triphenylmethane dyes)

IT Dyes

 (electrophoresis of)

IT Dyes

10593612

(triphenylmethane, anodic oxidation of)
IT Violaminedisulfonic acid
RL: PREP (Preparation)
IT 2390-59-2
(Derived from data in the 7th Collective Formula Index (1962-1966))
IT 6860-63-5P, Benzidine, N,N,N',N'-tetraethyl-
RL: PREP (Preparation)
(formation from triphenylmethane dyes by anodic oxidation)
IT 366-29-0P, Benzidine, N,N,N',N'-tetramethyl-
RL: PREP (Preparation)
(formation of, from 4,4'-methylenedianiline derivs. by anodic oxidation)
IT 101-61-1, Aniline, 4,4'-methylenebis[N,N-dimethyl- 548-62-9, C.I. Basic Violet 3 569-64-2, C.I. Basic Green 4 633-03-4, C.I. Basic Green 1 4865-00-3, C.I. Basic Violet 4, leuco
(oxidation (anodic) of)
IT 10213-95-3P, Benzoic acid,
o-[3-[(4-sulfo-o-tolyl)imino]-6-o-toluidino-3H-xanthen-9-yl]-
RL: PREP (Preparation)
(preparation of)

L13 ANSWER 35 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1962:50496 CAPLUS
DN 56:50496
OREF 56:9561e-g
ED Entered STN: 22 Apr 2001
TI The problem of the correlation of the processes of inductive mutual action
of excited and nonexcited molecules
AU Rubinov, V. M.; Kizel, V. A.
SO Izvest. Akad. Nauk Uzbek. S.S.R., Ser. Fiz.-Mat. Nauk (1961), (No. 4), 63-6
DT Journal
LA Unavailable
CC 9 (Electric and Magnetic Phenomena)
AB When varying the concentration of the studied dye, either the force of the absorption oscillator or the luminescence yield changes. The variation of the force (f) of the absorption oscillators is shown to depend on the mean distance for mols. of Rhodamine 6G, fuchsine, crystal violet, and methylene blue. In all cases it is observed that, beginning from a certain "critical" intermol. distance R1 (14-31 A.), f falls rapidly.
This fall was related to the inductive mutual action of the absorption oscillators of the dye tool. To confirm this view, the dependence of the luminescence quenching on the concentration of all the above cited dyes has been studied. The Foerster theory of the inductive mutual action (CA 43, 5667d) yields a $R_2 \div R_1$ ratio, where R2 is the intermol. distance where the luminescence fall begins, which agrees, in magnitude, with that found exptl. Thus, for wide lines, the mechanism of inductive mutual action is the same, whether for oscillators of absorption or for those of radiation,

- in agreement with the phenomenological theory of the inductive mutual action.
- IT Molecules
(interactions and vibrations of, dye luminescence in relation to)
- IT Dyes
(luminescence of, mol. complexes and vibrations in relation to)
- IT Luminescence
(of dyes, mol. interactions and vibrations in relation to)
- IT 61-73-4, C.I. Basic Blue 9 632-99-5, C.I. Basic Violet 14
4865-00-3, C.I. Basic Violet 3, leuco form 7682-83-9, Benzoic
acid, o-[6-(ethylamino)-3-(ethylimino)-2,7-dimethyl-3H-xanthen-9-yl]-,
ethyl ester hydrochloride
(luminescence of, mol. interactions and vibrations in relation to)
- L13 ANSWER 36 OF 36 CAPLUS COPYRIGHT 2009 ACS on STN
AN 1961:46792 CAPLUS
DN 55:46792
OREF 55:9013f-h
ED Entered STN: 22 Apr 2001
TI Radiational oxidation of leuco bases in ketones in the absence of oxygen
AU Bakh, N. A.; Babicheva, G. G.; Larin, V. A.
SO Doklady Akademii Nauk SSSR (1960), 134, 1079-82
CODEN: DANKAS; ISSN: 0002-3264
DT Journal
LA Unavailable
CC 2 (General and Physical Chemistry)
AB cf. Cherniak, et al., CA 52, 9785h. Irradiation of solns. of crystal
violet leuco base in Me₂CO and MeCOEt under N₂ resulted in oxidation of
the leuco base. The results, shown in the form of spectral curves during the
progress of the reaction, indicate that x-rays, γ-rays from Co⁶⁰, or
α-particles from Po were effective. The amount of oxidation is directly
proportional to the radiation dose used. The effect is independent of
the temperature The reaction is certainly one between the leuco base and
radiolysis products of the solvent ketones, probably radicals: Ac·, Me·
and MeCOCH₂·; probably the first of these removes the H atom from
the central C of the leuco base. The reaction also forms AcH probably
from the attack by the Ac radical on Me₂CO (yield of 2.5 mols./100 e.v.).
Similar oxidation was observed for leuco bases of malachite green,
brilliant green, and ethyl violet, in Me₂CO. The reaction is almost absent in
EtOH,
but the latter solvent, unlike Me₂CO, is responsible for decolorization
of methylene blue during irradiation in a reversible reaction.
- IT Ketones
(leuco base oxidation by irradiation, in absence of O)
- IT Gamma rays
X-rays
(leuco base oxidation by, in ketones in absence of O)
- IT Oxidation
(of leuco bases in ketones by irradiation in absence of O)
- IT Ultraviolet and visible, spectra

10593612

(of leuco bases in ketones, radiational oxidation and)
IT Decolorization
(of methylene blue in EtOH, by irradiation)
IT 61-73-4, Methylene blue
(decolorization of, in EtOH by radiation)
IT 75-07-0P, Acetaldehyde
RL: PREP (Preparation)
(formation of, in leuco base radiational oxidation in acetone)
IT 67-64-1, Acetone 78-93-3, 2-Butanone
(leuco base oxidation by irradiation in, in absence of O)
IT 12587-46-1, Alpha ray
(leuco base oxidation by, in ketones in absence of O)
IT 64-17-5, Ethyl alcohol
(methylene blue decolorization in, by irradiation)
IT 603-48-5, Aniline, 4,4',4''-methylidynetris[N,N-dimethyl-
4865-00-3, Aniline, 4,4',4''-methylidynetris[N,N-diethyl-
(oxidation in ketones by irradiation)
IT 82-90-6, Aniline, 4,4'-benzylidenebis[N,N-diethyl- 129-73-7, Aniline,
4,4'-benzylidenebis[N,N-dimethyl-
(oxidation of, in ketones by irradiation)

=> D HIS

(FILE 'HOME' ENTERED AT 13:37:57 ON 02 FEB 2009)

FILE 'CAPLUS' ENTERED AT 13:38:35 ON 02 FEB 2009
L1 1 S US20070191520/PN

FILE 'REGISTRY' ENTERED AT 13:39:35 ON 02 FEB 2009
L2 0 S -----STN ONLINE AND
RESULTS-----
L3 3 S 4865-00-3 OR 60813-12-9 OR 219631-61-5

FILE 'CAPLUS' ENTERED AT 13:40:49 ON 02 FEB 2009
L4 50 S L3

FILE 'REGISTRY' ENTERED AT 13:41:28 ON 02 FEB 2009
L5 1 S 60813-12-9
L6 1 S 219631-61-5

FILE 'CAPLUS' ENTERED AT 13:41:56 ON 02 FEB 2009
L7 6 S L5
L8 2 S L6
L9 43 S L4 NOT L7 NOT L8
L10 4 S L9 AND FREE
L11 3 S L4 AND CATIONIC
L12 40 S L4 NOT L11 NOT L7 NOT L8
L13 36 S L12 NOT L10

=> LOG Y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

197.26

281.74

10593612

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-45.92	-46.74

STN INTERNATIONAL LOGOFF AT 13:46:14 ON 02 FEB 2009